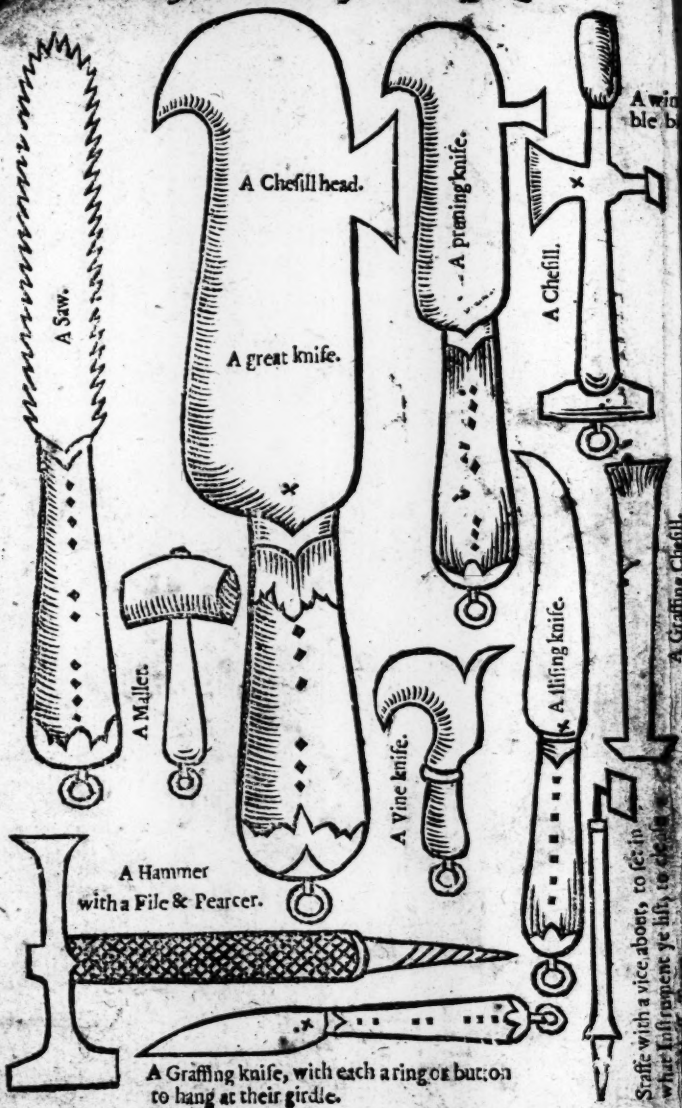
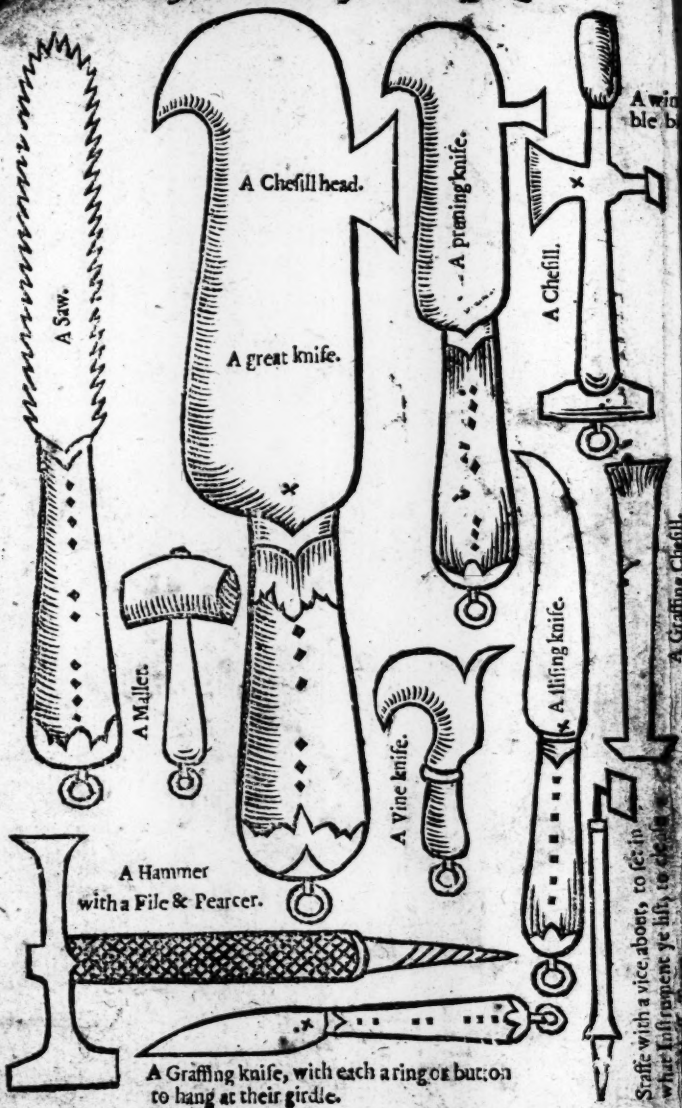


Instruments for Graffing.



Instruments for Graffing.



A Saw.

A Mallet.

A Hammer
with a File & Pearcer.

A Chefill head.

A great knife.

A Vine knife.

A pruning knife.

A Chefill.

A sliding knife.

A Grafting Chefill.

A Grafting knife, with each a ring or button
to hang at their girdle.

A win-
ble b

Staffe with a vice, about, to set in
what Instrument ye list, to cleave

THE
Country-Mans
NEW ART OF
PLANTING
AND
GRAFFING:

Directing the best way to make
any ground good for a Rich Orchard:

With the manner how to Plant and Graffe
all sorts of Trees; to Set and Sow Curnels; As
also the Remedies and Medicines concerning
the same: With divers other New Experiments:

Practised by **LEONARD MASCALL.**

Published by Authority.



*Huber
165*

Graffe with a vice abouts to let in
what instrument ye list, to cleave

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end of Chriſt Church, 1652.

Sept. 1916

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Instructions for the PLANTER
and GRAFFER.



ALwaies before ye do intend to Plant
or Graffe, it shall be meet to have
good experience in things meet
for this Art, as in knowing the Na-
tures of all Trees and Fruits, and
the differences of Climates, which
be contrary in every Land : also
to understand the East and West winds, with aspects
and Staes, to the end ye may begin nothing that
the Wind or Raine may oppresse, that your labour
be not lost, and to marke also and consider the di-
sposition of the Elements that present yeare, for
all years be not of like operation, nor yet after one
sort : the Summer and Winter do not bare one face
on the Earth, nor the Spring time alwaies Raine, or
Autumne alwaies moist : of this none have under-
standing, without a good and lively marking spirit,
few or none (without learing) may discern of the
varieties and qualities of the earth, and what it
doth aske or refuse. Therefore it shall be good to
have understanding of the ground where ye doe
plant,

To the Planters and Graffers.

plant, either Orchard or Garden with fruit : first it behooveth to make a sure defence, to the end that not onely rude persons and Children may be kept out, but all kind of hurtful Cattell, in damaging your Plants or Trees, as Oxen, Kine, Calves, Horses, Hogs, and Sheep, as the rubbing of Sheep doth greatly burne the Sap, and often doth kill young Trees and Plants, and where they are broken, or bruised with Cattell, it is doubtfull to grow after. It shall be good also to Set, Plant, or Graffe Trees all of like nature, and strength together, that the great and high Trees, may not overcome the low and weake, for when they be not of like height, they grow nor ripe nor your fruit so well at one time, but the one before the other : That earth which is good for Vines, is good also for other fruit.

Ye must digge your holes a yeere before ye plant, that the earth may be the better seasoned, mortified, and wax tender, both by Raine in Winter, and Heat in Sommer, that thereby your Plants may take root the sooner, if ye wil make your holes and plant both in a year, at the least, ye ought to make your holes two months before ye plant, and as soone as they be made, then it shall be good to burn of straw, or such like therein, to make your ground warme : the further ye make them asunder, the better your Trees shall beare, make your holes like unto a Fornace, that is, more straight in the mouth then beneath, whereby the roots may have the more roome, and by straightnesse of the mouth, the lesse Raine or cold shall enter thereby in Winter, and also lesse heat to the root in Sommer.

Looke

To the Planters and Graffers.

Looke also that the earth ye put to the roots, be neither wet, nor laid in water: they do commonly leave a good space betwixt every Tree, for the hanging boughes, being nigh together, ye cannot set roots, nor sow nothing so well under your trees, nor they will not bear fruit so well: Some loweth fortie foot, some thirtie foot, some thirtie between every Tree: Your plants ought to be greater then the handle of a shovell, and the lesser the better: See they be straight, without knots, or knobs, having a long straight graine of barke, which shall the sooner be apt to take Graffes, and when ye set branches or boughes of old Trees, choose the youngest and straightest, branch thereof, and those Trees which have borne yearlie good fruit before, take of those that grow on the Sunny side, sooner then those that grow in the covert or shadow, and when ye take up or alter your plants, ye shall note to what winds your plant is subject, and so let them be set againe, but those which have grown in drie grounds, let them be set in moist ground: Your plants ought to be cut off three foot long. If ye will set two or three plants together in a hole, ye must take heed the roots touch not one another, for then the one will perish and rot the other, or die by Wormes or other Vermin, and when you have placed your plants, in the earth, it shall be good to strike down to the bottome of every hole, two short stakes as great as your arme, on either side your hole, one: and let them appear but a little above the earth, that ye may (thereby in Sommer) give water unto the roots if need be. Your young plants, and rooted Trees are commonly set in Au-

To the Planters and Graffers

sunne, from the first unto the fifteenth of *October*, yet some are of opinion better after *Allobontide* unto *Christmas*, then in the Spring, because the earth will die too soone after, and also to set Plants without root after *Michaelmas*, that they may be the better mollified and gather root against the Spring, whereof ye shall finde hereafter more at large. Thus much have I thought meet to declare unto the Planters and Graffers, whereby they may the better avoid the occasion and danger of Planting and Graffing, which may come often times through ignorance.

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The

The Table of all the principall things contained in this Booke, which y^e shall hereafter finde by number and Leafe.

Of the seven Chapters following.

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The Art of
P L A N T I N G
AND
G R A F F I N G.

CHAP. I.

This Chapter treateth of the setting of Kernels, young Plum trees, and Pear trees, of Damson and Service trees.



Or to make young trees of the Pepins of Apples, Pears, Plums, and Services; First ye must prepare and make a great bed or quarter well replenished, blend or mixt with good fat earth, and placed well in the Sun, and to be well laboured and digged a good time before you do occupy it: and if ye can by any means, let it be digged very

deep the Winter before, in blending or mixing it well together with good fat earth, or else let it be mixed almost the halfe with good dung: and so let it rot and ripen together with the earth. And see alwais that plot be clean where you intend to Plant, that no wild Cion or Plants do spring or grow thereon. Then in the moneth of September, December or thereabouts, take of the Pepins,

or Pomes of the said fruit at the first pressing out of your liquor, before the kernels be marred or bruised : then take out of them, and rub a few at once in a cloth, and dry them betwixt your hands, and take so many thereof as you shall thinke good : then make your bed square, faire and plaine, and sow your seeds thereon, then take and cover them with a rake lightly, or with earth, not putting too much upon them. This done, divide your beds into quadrants or squares, of four foot broad or thereabouts, that when ye list, ye may cleanse them from the one side to the other, without treading thereon. Then shall ye cover your Seeds or Pepins with fine earth, so lifting all over them, that then they may take the deeper and surer root, and keepe the better in Winter following, and if ye list ye may rake them a little all over, so that ye raise not your Pepins above the earth.

Another way how one may take the Pepins at the first coming of the liquor or pressing.

YE shall choose the greatest and fairest kernels or Pepins, and take them forth at the first bruising of your fruit; then dry them with a cloth, and keepe them all the Winter, untill St. Andrews tide : then a little after sow them in good earth, as thin as ye sow Peason, and then rake them over as the other.

How one ought to use his earth to sow Pepins without dunging.

BUt in this manner of digging (in the Spring) it is not so great need for to raise or dig so deepe as that which is dunged in Winter : but to divide your quarters, in covering your Pepins not so much with earth as those which be sown with good dung, but when ye have sown them, rake them a little all over.

How ye ought to take heed of Poultry for scraping of your beds or quarters.

AS soon as your Pepins be sown upon your beds or quarters let this be done one way or other, that is, take good heed that your Hens do not scrape your beds or quarters; therefore stick them all over light and thin with boughes or thornes, and take good heed also to Swine, and all other Cattel.

How to weed or cleanse your beds or quarters.

When the Winter is past and gone, and that ye see your Pepins rise and grow, so let them increase the space of one yeare: but see to cleanse weeds, or other things which may hurt them, as ye shall see cause. And in the Summer when it shall wax dry, water them in the evenings.

How one ought to pluck up the wild Cions.

When these wild Cions shall be great, as of the growth of one year, ye must then pluck them up all in the winter following, before they do begin to spring againe: Then shall ye set them and make of them a wild Orchard as followeth.

CHAP. II.

This Chapter treateth how one shall set againe the small wild trees, which come of Pepins, when they be first pluckt up.

EOr the bastard or wild trees, incontinent as soone as they be pluckt up, ye must have of other good earth well trimmed and dunged, and to be wel in the Sun, and well prepared and drest, as it is said already of the Pepins.

How to dung your Bastard or wild young trees which come of Pepins.

ABout Advent (before Christmas) ye must dig and dung well the place whereas ye will set them, and make your square of earth even and plaine, so large as ye shall thinke good; then set your wild trees so far one from another as ye thinke meet to be graft, so that they may be set in even rankes and in good order, that when need shall require, ye may remove or renew any of them or any part thereof.

How ye ought in re-planting or setting, to cut off in the midst the principall great root.

IN what part soever ye do set your trees, ye must cut off the great master root, within a foot of the stock, and all other big roots, so that ye leave a foot-long thereof, and so let them be set, and

make your rankes crosse-wise one from another halfe a foot, or thereabouts, and ye must also see that there be of good dung more deep and lower then ye do set your trees, to comfort the said roots withall.

How you ought to set your trees in ranke.

YE shall set your small young trees in rankes, halfe a large foot one from another : and let them be covered as ye do set them, with good fat earth all over the roots.

How to make the space from one ranke to another.

YE shall leave between your ranks, from one ranke to another, one foot, or thereabouts, so that ye may presse between every ranke for to clense them if need require, and also to grasse any part or parcell thereof when time shall be meet. But ye must note, in making thus your rankes, ye shall make as many Allies as rankes. And if ye thinke it not good to make so many Allies, then divide those into quarters of five foot broad, or thereabouts, and make and set foure ranks (in each quarter of the same) one foot from another, as ye use to set great Cabbage. And as soon after as ye have set them in ranks and good order, as is aforesaid, then shall ye cut off all the sets even by the ground. But in thus doing, see that ye do not pluck up or loose the earth which is about them : or if ye will, ye may cut them before ye do set them in ranks ; If ye do so, see that ye set them in such good order, and even with the earth, as is aforesaid. And it shall suffice also to make your ranks as ye shall see cause. And looke that ye furnish the earth all over with good dung, without mingling of it in the earth, nor yet to cover the said plants withall, but strowed betwixt : and ye must also look well to the clensing of weeds, grasse, or other such things which will be a hurt to the growth of the Plants.

How to water Plants when they wax drie.

IT shall be good to water them when the time is dry : in the first yeare ; Then when they have put forth new Cions, leave no more growing but that Cion which is the principal and fairest, upon every stock one : all the other cut off hard by the stock : and ever as there do grow small twigs about the stock, ye shall (in the moneth of *March* and *April*) cut them all off hard by the stock. And if ye then stick by every plant a pretty wand, and so bind them with

Planting and Graffing.

with willow barke, brier, or Oziers, it shall profit them much in their growth. Then after five or six yeares growth, when they be so big as your finger, or thereabouts, ye may then remove any of them whereas you will have them grow and remain.

How one ought to remove trees and to plant them againe.

THe manner how ye ought to remove trees, is shewed in the fixt Chapter following : then about two or three year after their removing, ye shall graffe them, for then they will be the better rooted. As for the others which ye leave still in rankes, ye may graffe them whereas they stand, as ye shall see cause good. When ye have plucked up the fairest to plant in other places (as is afore-said) the manner how to Graffe them, is shewed in the fifth Chapter following. But after they shall be so graft, in what place soever it be, ye shall not remove or set them in other places againe, untill the Graffes be well closed upon the head of the wild stock.

When the best time is to re-plant or remove.

WHen the head of the stock shall be all over closed about the graffes, then ye may when ye will, transplant and remove them (at a due time) where they shall continue. For with often moving, ye shall do them great hurt in their roots, and be in danger to make them die.

Of negligence and forgetfulnesse.

IF peradventure yee forget (through negligence) and have let small Cions two or three years grow about the roots of your stocks unplucked up, then if ye have so done, ye may well pluck them up and set them in rankes, as the other of the Pepins. But ye must set the rankes more large, that they may be removed without hurting of each others roots : and cut off all the small twigges above as need shall require, though they be set or grafted. Order them also in all things as those small Cions of a years growth.

It is not so convenient to graffe the Service tree, as to set him.

WHereas ye shall see young Service trees, it shall be most profit in setting them ; for if ye graffe them, I beleeeve ye shall win nothing thereby. The best is onely to pluck up the young Bastard trees when they are as great as a good walking-staffe ; then prune or cut off their branches and carry them to set whereas they may

may be no more removed : and they shall profit more in setting then grafting.

Some trees without grafting bring forth good fruit, and some other being grafted be better to make Sider of.

IT is here to be marked, that though the Pepins be sowed of the Pomes of Pears and good Apples, yet ye shall find that some of them do love the tree whereof they came : and those be right, which have also a smooth barke, and as faire as those which be grafted : the which if ye plant or set them thus growing from the master root without grafting, they shall bring as good fruit, even like unto the Pepin whereof he first came. But there be other new sorts commonly good to eat, which be as good to make Sider of as those which shall be grafted for that purpose.

When you list to augment and multiply your trees.

After this sort ye may multiply them, being of divers sorts and diversities, as of Pears, or Apples, or such like. Notwithstanding, whensoever you shall find a good tree thus come of the Pepin, as is aforesaid, so shall ye use him. But if ye will augment trees of themselves, ye must take Graffes and so graffe them.

Of the manner and changing of the fruit of the Pepin tree.

Whensoever ye doe replant or change your Pepin trees from place to place, in so removing often the stock, the fruit thereof also changes : but fruit which doth come of grafting doth alwaies keep the forme and nature of the tree whereof he is taken : for as I have said, as often as the Pepin trees be removed to a better ground, the fruit thereof shall be so much amended.

How we ought to make good Sider.

Here is to be noted, if ye will make good Sider of what fruit soever it be, being Pears or Apples, but specially of good Apples & wild fruit, have alwaies regard unto the ripening thereof ; so gathered dry, then put them in dry places, on boords in heaps, covered with dry straw, and whensoever ye will make Sider thereof, chuse out all those that are black, bruised, and rotten Apples, and throw them away, then take and use the rest for Sider. But ~~this is to give you understanding,~~ do not as they do in the Country
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of *Mentz*, which do put their fruit gathered into the midst of their Garden, in the raime and millings, upon the bare earth, which wil make them to lose their force and vertue, and doth make them also withered and tough, and likely a man shall never make good Sider that shall come to any purpose or good profit thereof.


To make an Orchard in few yeares.

SOME do take straight slips, which do grow from the roots, or of the sides of the Apple trees, about *Michaelmas*, and do so plant or set them (with Oates) in good ground, whereas they shall not be removed, and so graffe (being well rooted) thereon. Othersome do take and set them in the spring time (after *Christmas*) in like wise, and do graffe thereon when they be well rooted: and both do spring well. And this manner of way is counted to have an Orchard the soonest. But these trees will not indure past twenty or thirty yeares.

CHAP. III.

This Chapter is of setting Trees of Nuts.

How one ought to set trees which come of Nuts.

 OR to set trees which come of Nuts; when ye have eaten the fruit, looke that ye keepe the Stones and Kernels thereof, then let them be dried in the wind, without the vehemency of the Sunne, so reserve them in a box and use them as before.

Of the time when ye ought to plant or set them.

YE shall plant or set them in the beginning of Winter, or afore *Michaelmas*, whereby they may the sooner spring out of the earth. But this manner of setting is dangerous: for the Winter then coming in, and they being young and tender in coming up, the cold wil kill them. Therefore it shall be best to stay and reserve them till after Winter. And then before ye do set them, ye shall soke or steep them in Milke, or in Milke and Water, so long till they do stink therein: then shall ye dry them and set them in good earth, in the change or increase of the Moon, with the small end upward, four fingers deep; then put some stick thereby to marke the place.

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or Pomes of the said fruit at the first pressing out of your liquor, before the kernels be marred or bruised : then take out of them, and rub a few at once in a cloth, and dry them betwixt your hands, and take so many thereof as you shall thinke good : then make your bed square, faire and plaine, and sow your seeds thereon, then take and cover them with a rake lightly, or with earth, not putting too much upon them. This done, divide your beds into quadrants or squares, of four foot broad or thereabouts, that when ye list, ye may cleanse them from the one side to the other, without treading thereon. Then shall ye cover your Seeds or Pepins with fine earth, so lising all over them, that then they may take the deeper and surer root, and keepe the better in Winter following, and if ye list ye may rake them a little all over, so that ye raise not your Pepins above the earth.

Another way how one may take the Pepins at the first coming of the liquor or pressing.

YE shall choose the greatest and fairest kernels or Pepins, and take them forth at the first bruising of your fruit; then dry them with a cloth, and keepe them all the Winter, untill St. *Andrews* tide : then a little after sow them in good earth, as thin as ye sow Peason, and then rake them over as the other.

How one ought to use his earth to sow Pepins without dunging.

BUt in this manner of digging (in the Spring) it is not so great need for to raise or dig so deepe as that which is dunged in Winter : but to divide your quarters, in covering your Pepins not so much with earth as those which be sown with good dung, but when ye have sown them, rake them a little all over.

How ye ought to take heed of Poultry for scraping of your beds or quarters.

AS soon as your Pepins be sown upon your beds or quarters let this be done one way or other, that is, take good heed that your Hens do not scrape your beds or quarters; therefore stick them all over light and thin with boughes or thornes, and take good heed also to Swine, and all other Cattel.

How to weed or cleanse your beds or quarters.


When the Winter is past and gone, and that ye see your Pepins rise and grow, so let them increase the space of one yeare: but see to cleanse weeds, or other things which may hurt them, as ye shall see cause. And in the Summer when it shall wax dry, water them in the evenings.

How one ought to pluck up the wild Cions.

When these wild Cions shall be great, as of the growth of one year, ye must then pluck them up all in the winter following, before they do begin to spring againe: Then shall ye set them and make of them a wild Orchard as followeth.

CHAP. II.

This Chapter treateth how one shall set againe the small wild trees, which come of Pepins, when they be first pluckt up.

 Or the bastard or wild trees, incontinent as soone as they be pluckt up, ye must have of other good earth well trimmed and dunged, and to be wel in the Sun, and well prepared and drest, as it is said already of the Pepins.

How to dung your Bastard or wild young trees which come of Pepins.

About Advent (before Christmas) ye must dig and dung well the place whereas ye will set them, and make your square of earth even and plaine, so large as ye shall thinke good; then set your wild trees so far one from another as ye thinke meet to be graft, so that they may be set in even rankes and in good order, that when need shall require, ye may remove or renew any of them or any part thereof.

How ye ought in re-planting or setting, to cut off in the midst the principall great root.

IN what part soever ye do set your trees, ye must cut off the great master root, within a foot of the stock, and all other big roots, so that ye leave a foot-long thereof, and so let them be set, and

make your rankes crosse-wise one from another halfe a foot, or thereabouts, and ye must also see that there be of good dung more deep and lower then ye do set your trees, to comfort the said roots withall.

How you ought to set your trees in ranke.

YE shall set your small young trees in rankes, halfe a large foot one from another : and let them be covered as ye do set them, with good fat earth all over the roots.

How to make the space from one ranke to another.

YE shall leave between your rankes, from one ranke to another, one foot, or thereabouts, so that ye may presse between every ranke for to clense them if need require, and also to grasse any part or parcell thereof when time shall be meet. But ye must note, in making thus your rankes, ye shall make as many Allies as rankes. And if ye thinke it not good to make so many Allies, then divide those into quarters of five foot broad, or thereabouts, and make and set foure rankes (in each quarter of the same) one foot from another, as ye use to set great Cabbage. And as soon after as ye have set them in rankes and good order, as is aforesaid, then shall ye cut off all the sets even by the ground. But in thus doing, see that ye do not pluck up or loose the earth which is about them : or if ye will, ye may cut them before ye do set them in rankes ; If ye do so, see that ye set them in such good order, and even with the earth, as is aforesaid. And it shall suffice also to make your rankes as ye shall see cause. And looke that ye furnish the earth all over with good dung, without mingling of it in the earth, nor yet to cover the said plants withall, but strowed betwixt : and ye must also look well to the clensing of weeds, grasse, or other such things which will be a hurt to the growth of the Plants.

How to water Plants when they wax drie.

IT shall be good to water them when the time is dry : in the first yeare ; Then when they have put forth new Cions, leave no more growing but that Cion which is the principal and fairest, upon every stock one : all the other cut off hard by the stock : and ever as there do grow small twigs about the stock, ye shall (in the moneth of March and April) cut them all off hard by the stock. And if ye then stick by every plant a pretty wand, and so bind them with

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with willow barke, brier, or Oziers, it shall profit them much in their growth. Then after five or six yeares growth, when they be so big as your finger, or thereabouts, ye may then remove any of them whereas you will have them grow and remain.

How one ought to remove trees and to plant them againe.

THe manner how ye ought to remove trees, is shewed in the fixt Chapter following : then about two or three year after their removing, ye shall graffe them, for then they will be the better rooted. As for the others which ye leave still in rankes, ye may graffe them whereas they stand, as ye shall see cause good. When ye have plucked up the fairest to plant in other places (as is afore-said) the manner how to Graffe them, is shewed in the fifth Chapter following. But after they shall be so graft, in what place soever it be, ye shall not remove or set them in other places againe, untill the Graffes be well closed upon the head of the wild stock.

When the best time is to re-plant or remove.

WHen the head of the stock shall be all over closed about the graffes, then ye may when ye will, transplant and remove them (at a due time) where they shall continue. For with often moving, ye shall do them great hurt in their roots, and be in danger to make them die.

Of negligence and forgetfulnesse.

IF peradventure yee forget (through negligence) and have let small Cions two or three years grow about the roots of your stocks unplucked up, then if ye have so done, ye may well pluck them up and set them in rankes, as the other of the Pepins. But ye must set the rankes more large, that they may be removed without hurting of each others roots : and cut off all the small twiggess above as need shall require, though they be set or grafted. Order them also in all things as those small Cions of a years growth.

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WHereas ye shall see young Service trees, it shall be most profit in setting them ; for if ye graffe them, I beleeeve ye shall win nothing thereby. The best is onely to pluck up the young Bastard trees when they are as great as a good walking-staffe ; then prune or cut off their branches and carry them to set whereas they may

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When you list to augment and multiply your trees.

AFter this sort ye may multiply them, being of divers sorts and diversities, as of Pears, or Apples, or such like. Notwithstanding, whensoever you shall find a good tree thus come of the Pepin, as is aforesaid, so shall ye use him. But if ye will augment trees of themselves, ye must take Graffes and so graffe them.

Of the manner and changing of the fruit of the Pepin tree.

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How we ought to make good Sider.

Here is to be noted, if ye will make good Sider of what fruit soever it be, being Pears or Apples, but specially of good Apples & wild fruit, have alwaies regard unto the ripening thereof ; so gathered dry, then put them in dry places, on boords in heaps, covered with dry straw, and whensoever ye will make Sider thereof, chuse out all those that are black, bruised, and rotten Apples, and throw them away, then take and use the rest for Sider. But

of *Mentz*, which do put their fruit gathered into the midst of their Garden, in the raine and millings, upon the bare earth, which wil make them to lose their force and vertue, and doth make them also withered and tough, and likely a man shall never make good Sider that shall come to any purpose or good profit thereof.


To make an Orchard in few yeares.

SOME do take straight slips, which do grow from the roots, or of the sides of the Apple trees, about *Michaelmas*, and do so plant or set them (with Oates) in good ground, whereas they shall not be removed, and so graffe (being well rooted) thereon. Othersome do take and set them in the spring time (after *Christmas*) in like wise, and do graffe thereon when they be well rooted: and both do spring well. And this manner of way is counted to have an Orchard the soonest. But these trees will not indure past twenty or thirty yeares.

CHAP. III.

This Chapter is of setting Trees of Nuts.

How one ought to set trees which come of Nuts.

 OR to set trees which come of Nuts; when ye have eaten the fruit, looke that ye keepe the Stones and Kernels thereof, then let them be dried in the wind, without the vehemency of the Sunne, so reserve them in a box and use them as before.

Of the time when ye ought to plant or set them.

YE shall plant or set them in the beginning of Winter, or afore *Michaelmas*, whereby they may the sooner spring out of the earth. But this manner of setting is dangerous: for the Winter then comming in, and they being young and tender in coming up, the cold wil kill them. Therefore it shall be best to stay and reserve them till after Winter. And then before ye do set them, ye shall soke or steep them in Milke, or in Milke and Water, so long till they do sink therein: then shall ye dry them and set them in good earth, in the change or increase of the Moön, with the small end upward, four fingers deep; then put some stick thereby to marke the place.

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For to set them in the Spring time.

IF ye will plant or set your Nuts in the Spring time where ye will have them still to remain, and not to be removed, the best and most easie way is to set in every such place (as ye think good) three or four Nuts nigh together, and when they do all spring up, leave none standing but the fairest.

Of the dunging and deep digging thereof.

ALso whereas ye shall think good, ye may plant or set all your Nuts in onesquare or quarter together in good earth and dung, in such place and time as they use to plant. But see that it be well dunged, and also digged good and deep, and to be well mingled with good dung throughout; then set your Nut, three fingers deep in the earth, and halfe a foot one from another: ye shall water them often in the Summer when there is dry weather, and see to weed them, and dig it as ye shall see need.

Of Nuts and Stones like the trees they came of.

IT is here to be noted, that certaine kind of Nuts and Curnels do love the trees they came of, & their fruit is like unto them, when they be planted in good ground, and set well in the Sun; which be, the Walnuts, Chestnuts, all kind of Peaches, Figs, Almonds, and Apricots; all these do love the Trees they came of.

ALL the said Trees do bring as good fruit of the said Nuts, if they be well planted, and set in good earth, and well in the Sun, as the fruit and Trees they came of.

Why fruit shall not have so good favour.

IF ye plant good Nuts, good Peaches, or Figs in a Garden full of shadow, the which hath afore loved the Sun, as the Vine doth, for lack thereof, their fruit shall not have so good favour, although it be all of one fruit: and likewise so it is with all other fruit and trees; for the goodnesse of the earth. and the faire Sun, doth pre-serve them much.

For to set the Pine tree.

FOr to set the Pine tree, ye must set or plant them of Nuts, in March, or about the shoot of the sap, not lightly after; ye must also set them where they may not be removed after, in holes well digged, and well dunged, not to be transplanted or removed again, for very hardly they will shoot forth Cions, being removed, especially if ye hurt the master root thereof.

For to set Cherrie trees.

FOr to set sower Cherries which do grow commonly in Gardens, ye shall understand they may well grow of stones, but better it shall be to take of the small Cions which do come from the roots: then plant them, and sooner shall they grow then the stones, and those Cions must be set when they are small, young and tender, as of two or three years growth; for when they are great, they profit not so well: and when ye set them, ye must see to cut off all the boughes.

Trees of Bastard and wild Nuts.

THere be other sort of Nuts, although they be well set in good ground, and also in the Sun, yet will they not bring halfe so good fruit as the other, nor commonly like unto those Nuts they came of, but be a bastard wild or sower fruit, which is the *Filberd*, smal Nuts, of *Plums*, of *Cberies*, and the great *Apricots*: therefore if ye will have them good fruit, ye must set them in manner and forme following.

How to set Filberds or Hasell trees.

FOr to set Filberds or Hasels, and to have them good, take the small wands that grow one from the root of the Filbert or Hasel tree (with short hairy twigs) and set them, and they shall bring as good fruit as the tree they came of. It shall not be needfull to prune, or cut off the branches thereof when ye set them, if they be not great; but those that ye do set, let them be of two or three years growth, and if ye shall see those Cions which ye have planted, not to be faire and good, or do not grow and prosper well, then (in the spring time) cut them off hard by the root, that other small Cions may grow thereof.

To set Damsons or Plum trees.

IN setting Damsons or Plum trees, which fruit ye would have like to the tree they came of: if the said trees be not graft before, ye shal take only the Cions that grow from the root (of the old stock)

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which groweth with small twigs, and plant or set them: and their fruit shall be like unto the trees they came of.

To take Plum graffes, and graffe them on other Plum trees.

ANd if your Plum tree be graft already, and have the like fruit that ye desire, ye may take your graffes thereof; and graffe them on your Plum trees, and the fruit that shall come thereof, shall be as good as the fruit of the Cions which is taken from the root, because they are much of like effect.

To set all sorts of Cherries.

TO set all sorts of great Cherries, and others, ye must have the graffes of the same trees, and graffe them on other Chery trees although they be of sower fruit: and when they are so graft, they will be as good as the fruit of the tree whereof the graffe was taken, for the stones are good to set, to make wild Cions, or plants to graffe on.

The manner how one may order both Plum trees and Cherry trees.

FOr as much as these two kind of trees, that is, the Cherry and the Plum tree; for when they be so graft, their roots be not so good, nor so free as the branches above; wherefore the Cions that do come from the roots, shall not make so good and frank trees of; It is therefore to be understood, how this manner and sort is to make franke trees, that may put forth good Cions in time to come, which is, when they be great and good; then if ye will take those Cions, or young sprigs from the roots, ye may make good trees thereof, and then it shall not need to graffe them any more after, but to augment one by the other, as ye do the Cions from the root of the Nut, as is aforesaid, and ye shall do as followeth

How to graffe Plum trees and Cherrie trees.

YE may well graffe Plum trees, and great Cherry trees, in such good order as ye list to have them, and as hereafter shall be declared in the fifth Chapter following: for these would be grafted while they are young and small, and also graft in the ground, for thereby one may dresse & trim them the better, and put one graffe in each stock of the same. Cleave not the heart, but a little on the one side, nor yet deep, or long open.

How ye must prune or cut your trees.

WHen your graffes be well taken on the stock, and that the graffes do put forth faire & long, above one years grow, ye must prune or cut the branch off, commonly in the Winter, (when they

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they prune their Vines) a foot lower, to make them spread the better : then shall ye mingle all through with good fat earth, the which will draw the better to the place, which ye have so pruned or cut.

The convenientest way to clesse and prune, or dresse the roots of trees.

ANd for the better clesning and pruning trees beneath, ye shall take away all the weeds, and graffe about the roots; then shall ye dig them so round about, as ye would seeme to pluck them up, and shall make them halfe bare; then shall ye enlarge the earth about the roots; and whereas ye shall see them grow fair and long, place or couch them in the said hole and earth againe: then shall ye put the cut end of the tree where it is graft, somewhat lower then his roots were whereby his Cions so graft shall spring so much the better,

When the stock is greater then the graffe.

WHen as the tree waxeth, and swelleth greater beneath the graffing then above; then shall ye cleave the roots beneath, and wreath them round, and so cover them againe. But see ye break no root thereof, so wil he come to perfection: But most men do use this way; If the stock wax greater then the graffes, they do slit down the barke of the graffes above, in two or three parts, or as they shall see cause: and so likewise, if the graffes wax greater above then the stock, ye shall slit down the stock accordingly, with the edge of a sharp knife. This may well be done at any time in *March, April, and May*, in the increase of the Moon, and not lightly after.

The remedy when any bough or member of a tree is broken.

IF ye shall chance to have boughes, or members of trees broken, the best remedies shall be to place those boughes or members right soon again, (then shall ye comfort the roots with good fat earth) and bind fast those broken boughes or members, both above and beneath, and so let them remain unto another year, till they may close and put forth new Cions.

When a member or bough is broken, how to prune them.

WHerereas ye shall see under or above superfluous boughes, ye may cut or prune off, (as ye shall see cause) all such boughes hard by the tree, at a due time, in the Winter following. But leave all the principal branches; and whereas any are broken, let them be cut off beneath, or else by the ground, and cast them away: thus

must ye do yearly, or as ye shall see cause, if ye will keep your trees well and faie.

How one ought to enlarge the hole about the trees root.

IN pruning your trees, if there be any roots, ye must enlarge them in the hole, and so wreath them, as is aforesaid, and ule them without breaking, then cover them againe with good fat earth, which yee shall mingle in the said hole, and it shall be best to be digged all over a little before, and see that no branch or root be left uncovered; and when you have thus dressed your trees, if any root shall put forth, or spring hereafter out of the said holes, in growing, ye may so prune them as ye shall see cause, in letting them so remaine two or three years after, untill such time as the said grasses be sprung up, and well branched.

How to set small staves by to strengthen your Cions.

TO avoid danger, ye shall set or prick small staves about your Cions, for fear of breaking, and then after three or four years, when they be wel branched, ye may then set or plant them in good earth, (at the beginning of Winter) but see that ye cut off all the small branches hand by the stock, then ye may plant them where ye think good, so as they may remaine,

In taking up of trees, note.

YE may well leave the master root in the hole (when ye digge him up) if the removed place be good for him, cut off the master root by the stub, but pare not off all the small roots, and so plant him, and he shall profit more thus, then others with all their master roots. When all trees be great, they must be dis-branched, or boughes cut off, before they be set againe, or else they will hardly prosper. If the trees be great, having great branches or boughes, when ye shall digge them up, ye must dis-branch them before ye set them againe; for when trees shall be thus pruned, they shall bring great Cions from their roots, which shall be frank and good to replant, or set in other places, and shall have also good branches and roots, so that after it shall not need to grasse them any more, but shall continue one after another to be free and good.

How to cawch the roots when they are pruned.

IN setting your trees againe, if ye will dresse the roots of such as ye have pruned, or cut off the branches before, ye shall leave all such smal roots which grow on the great root, and ye shal so place those roots in re-planting again not deep in the earth, so that they may

may soon grow, and put forth Cions: which being well used, ye may have fruit so good as the other afore mentioned, being of three or four years growth, as afore is declared.

What trees to prune.

THis way of pruning is more hard for the great Chery (called Healmier) then for the Plum tree. Also it is very requisite and meet for those Cions, or trees, which be graft on the wild sower Chery tree, to be pruned also for divers and sundry causes.

VVhy the sower Chery dureth not so long as the Healmire or great Cherrie.

THe wild and sower Chery, of his own nature will not so long time endure (as the great Healmie Chery) neither can have sufficient sap to nourish the graffes, as the great Healmie Chery is graft; therefore when ye have pruned the branches beneath, and the roots also, so that ye leave roots sufficient to nourish the tree, then set him. If ye cut not off the under roots the tree will profit more easily, and also the lighter to be known, when they put forth Cions from the root of the same, the which ye may take hereafter.

To graffe one great Chery upon another.

YE must have respect unto the Healmie Chery, which is graft on the wild Gomire (which is another kind of great Chery) and whether you do prune them or not, it is not materiall: for they dure a long time. But ye must see to take away the Cions, that do grow from the root of the wild Gomire, or wild Plum tree, because they are of nature wild, and do draw the sap from the said trees.

Of deepe setting or shallow.

SET your stocks or trees somewhat deeper on the high grounds, then in the vallies, because the Sun (in Summer) shall not dry the root: and in the low ground more shallow, because the water (in Winter) shall not drown or annoy the roots; Some do marke the stock in taking up, and to set him again the same way, because he will not alter his nature: so likewise the graffes in graffing.

CHAP. IV

This Chapter sheweth how to set other Trees which come of Wild Cions, pricked in the earth without roots: and also of pruning the meaner Cions.

Trees take root prickt of branches.

Here be certaine which take root, being pricked of branches pruned off other Trees, which be the Mulbery, the Fig tree, the Quince tree, the Service tree, the Pomgrate tree, the Apple tree, the Damson tree, and divers sorts of other Plum trees, as the Plum tree of Paradise, &c.

How one ought to set them.

FOr to set those sort of Trees, ye must cut off the Cions, twigs or boughes, betwixt Alhallontide and Christmas, not lightly after. Ye shall choose them which be as great as a little staffe or more; and look whereas ye can find them fair, smooth, and straight and full of sap withall, growing of young trees, as of the age of three or foure years growth, or thereabouts, and look that ye take them so from the Tree with a broad Chisel, that ye break not or loose any part of the barke thereof, more then half a foot beneath, nei her of one side or other; then prune or cut off the branches, and pick them one foot deepe in the earth, well digged and ordered before.

How to bind them that be weake.

Those plants which be slender, ye must prune or cut off the branches, then bind them to some stake or such like to be set in good earth, and well mingled with good dung, and also to be well and deeply digged, and to be set in a moist place, or else to be well watered in Sommer.

How one ought far to dig the earth they set them in.

And when that ye would set them in the earth, ye must first prepare to dig it, and dung it well throughout a large foot deep in the earth. And when as ye will set them every one in his place made (before) with a crow of Iron, and for to make them take root the better, ye shall put with your plants, watered Oates or Barly, and so ye shall let them grow the space of three or four years, or which

when they shall be wel branched, then ye may remove them; and if ye break off the old stubby roots and set them lower, they will last a long time the more. If some of those plants do chance to put forth Cions from the root, ye must pluck them up though they be tender, and set them in other places.

Of Cions without roots.

IF the said plants have Cions without roots, which came from the tree root beneath, then cut them not till they be of two or three years growth, by that time they will gather roots to be planted in other places.

To plant the Fig tree.

THe said plants taken of Fig trees graffed, be the best. Ye may likewise take other sorts of Fig trees, and graffe one upon the other, for like as upon the wild trees do come the Pepins, even so the Fig, but not so soon to prosper and grow:

How to set Quinces.

Likewise the naure of Quinces is to spring, if they be pricked (as aforesaid) in the earth, but sometimes I have graffed with great difficulty (saith mine Author) upon a white Thorne, and it hath taken and born fruit, faire to looke on, but in tast more weak then the other.

The way to set Mulberies.

THere is also another way to set Mulberies, which is as followeth, if you do cut in Winter certaine great Mulbery boughes or stocks a sunder in the body (with a saw) in tronchions a foot long or more, then ye shal make a great furrow in good earth wel and deep, so that you may cover well again your tronchions, in setting them an end half a foot one from another, then cover them againe, that the earth may be above those ends, three or foure fingers high; so let them remaine, and water them (in summer) if need be something, and cense them from all hurtfull weeds and roots.

Another for the same.

NOte that within a space of time after, the said tronchions will put forth Cions, the which when they be somewhat sprigged, having two or three small twigs, then ye may transplant or remove them where ye list, but leave your tronchions stil in the earth, for they will put forth many motions, the which if they shall have scanty of root, then dung your tronchions with good earth, and likewise above also, and they shall do well.

The

The time to cut Cions.

YE shal understand that all trees which do commonly put forth Cions, if ye cut them in Winter, they will put forth and spring more abundantly, for then they be all good to set and plant.

To set Bush trees, or Gooseberies, or Reisons.

THere be many other kind of Bush trees, which will grow of Cions pricked in the ground: as the Goosebery tree, the smal Reison tree, the Barbery tree, the Black-thorne tree, these with many other, if planted in Winter, will grow without roots: ye must also prune them and they will take well enough; so likewise ye may prick (in March) of Oziers in moist grounds, and they will grow, and serve to many purposes for your garden.

CHAP. V.

This Chapter treateth of four manner of Graffings.

IT is to be understood that there be many waies of graffings, whereof I have here only put four sorts, the which be good, both sure and wel proved, and easie to do, the which ye may use wel in two parts of the year, & more, for I have (saith he) grafted in our ground, in every month, except *October* and *November*, and they have taken wel, which I have (saith he) in the Winter begun to graffe, and in the Summer graft in the *Scutchion* or shield according to the time, forward or slow: for certain trees, specially young faire Cions have enough or more of their sap unto mid August, then others some at *Midsummer* before.

The first way to graffe all sorts of trees.

ANd first of all it is to be noted, that all sorts of Frank trees, as also trees wild of nature, may be graft with graffes, and in the *Scutchion*, & both do take well, but specially those trees which be of like nature: therefore it is better so to graffe. Howbeit they may well grow and take of other sorts of trees, but certain trees be not so good, nor will prosper so well in the end.

How to graffe Apple trees, Pear trees, Quince trees, and Medlar trees.

They graffe the Pear graffe on the Pear stock, and Apples upon Apple stocks, Crab or Wilding stocks, the Quince and Medlar upon the White thorne; but most commonly they use to graffe one

Apple

Apple upon another, and both Pears and Quinces they graffe on Hathorn and Crab stock. Another kind of fruit called in French *Saulfey*, they use to graffe on the willow stock; the manner thereof is hard to do, which I have not seen, therefore I will let pass at this present.

The graffing of great Cherries.

They graffe the great Chery, called in French *Heaulmiers*, upon the Crab stock, and another long Chery called *Guymiers* upon the wild or sower Cherry tree, and likewise one Chery upon another.

To graffe Medlars.

The Mistle or Medlar, they may be grafted on other Medlars, or on the white Thorn; the Quince is grafted on the white or black Thorne, and they do prosper well; I have grafted (saith he) the Quince upon the wild Pear stock. and it hath taken and borne fruit, well and good, but they will not long endure. I believe (saith he) it was because the graffe was not able enough to draw the sap from the Pear stock. Some graffe the Medler on the Quince to be great. And it is to be noted, although the stock and the graffe be of contrary natures: yet notwithstanding, neither the graffe nor Scutchion, shall take any part of the nature of the wild stock so grafted, though it be Pear, Apple, or Quince, which is contrary against many which have written, that if ye graffe the Medler upon the Quince tree, they shall be without stones, which is an abuse and mockery. For I have (saith he) proved the contrary my selfe.

Of divers kinds of graffe.

IT is very true, that one may set a tree, which shall beare divers sorts of fruit at once, if he be grafted with divers kinds of graffe, as the black, white, and green Chery together, and also Apples of other trees, as Apples and Pears together, and in the Scutchion, ye may graffe) likewise of divers kinds also, as on Pears, Apricots, and Plums together, and of others also.

Of the graffing the Fig.

YE may graffe the Fig tree upon the Peach tree or Apricot, but leave a branch on the stock, & there must be according for the space of years, for one shall change sooner then the other. All trees abovesaid, do take very well being grafted one with the other. And I have not known, or found of any others, howbeit (saith he)

I have curiously sought and proved, because they say one may graffe in Coleworts, or on Elms, which I think are but jets.

Of the great Apricots.

THe great Apricots they graffe in Summer, in the Scutchion or shield, in the sap or barke of the lesser Apricot, and they be grafted on Peach trees, Fig trees, and principally on Damson or Plum trees, for then they will prosper the better.

Of the Service tree.

OF the Service tree they say and write, that they may hardly be graffe on other Service trees, either on Apple trees, Pear or Quince tree: and I believe this to be very hard to do, for I have tried (saith he) and they would not prove.

The setting of Services.

Therefore it is much better to set them of Kernels, as it is aforesaid, as also in the second Chapter of Planting of Cions, or other great trees, which must be cut in Winter, as such as shall be most meet for that purpose.

Trees which be very hard to be grafted, in the shield or Scutchion.

ALl other manner of trees aforesaid, doe take very well to be grafted with Cions, and also in the shield, except Apricots on Peaches, Almonds, Percigniers, the Peach tree, do take hardly to be grafted, but in the shield in Summer, as shall be more largely hereafter declared. As for the Almond, Percigniers and Peaches, ye may better set them of Kernels of Nuts, whereby they shall the sooner come to perfection to be grafted.

How a man ought to consider those trees, which be commonly charged with fruit.

YE shall understand that in the beginning of grafting, ye must consider what sort of trees doe most charge the stock with branch and fruit, or that do love the Country or ground where you intend to plant or graffe them: for better it were to have abundance of fruit, then to have very few or none good.

Of trees whereof to cuse your graftes.

OF such trees as you will gather your graftes to graffe with, ye must take them at the ends of the principall branches, which be also fairest & greatest of sap, having two or three finger's length of the old wood, with the new, and those Cions of eyes somewhat nigh together, are the best; for those which be long, or far one from another, be not so good for to bring fruit.

The Cions towards the East are best.

YE shall understand that those Cions which do grow on the East or Orient part of the tree, are best : ye must not lightly gather of the evill or slender graffes, which grow in the midst of the trees, nor any graffes which do grow within on the branches, or that do spring from the stock of the tree, nor yet graffes which be on very old trees, for thereby ye shall not lightly profit to any purpose.

To chuse your trees for graffes.

AND when the trees whereas you intend to gather your graffes, be small and young, as of five or six years growen, do not take of the highest graffe thereof nor the greatest, except it be of a small tree of two or three years, the which commonly hath too much of top or wood, otherwise not, for you shall but mar your grafting

How to keepe graffes a long time.

YE may keepe graffes a long time good, as from *Albanontide* (so that the leaves be fallen) unto the time of grafting, if that they be well covered in the earth half a foot deep therein, and so that none of them do appeare without the earth.

How to keepe graffes before they be budded.

YE shal not gather them except ye have great need, until *Christmas* or thereabouts, and put them not in the ground nigh any wals, for feare of Moles, Mice; and water, maring the place and graffes. It shall be good to keepe graffes in the earth before they begin to bud, when that ye will graffe betwixt the bark and the tree, and when the trees begin to enter into their sap.

How one ought to begin to graffe.

YE may well begin to graffe (in claving the stock) at *Christmas* or before, according to the coldnesse of the time, and principally the Heakne or great Chery, Pears, Wardens, or forward fruit of Apple : and for Medlers it is good to tary until the end of *January* and *February*, until *March*, or until such time as ye shall see trees begin to bud or spring.

When it is good grafting the wild stocks.

IN the spring time it is good grafting the wild stocks (which be great) betwixt the barke and the tree, such stocks as be of lateward spring, and kept in the earth before. The Damson or Plum carrieth longest to be graft : for they do not shew or put forth sap so soon as the others.

Marke if the tree be forward or not.

YE ought to consider alwaies, whether the tree be forward or not, or to be grafted soon or lateward, and to give him a graffe of the like hast or slownesse: even so ye must marke the time, whether it be slow or forward.

When one will graffe, what necessaries he ought to be furnished withall.

WHensoeuer ye geue to grafting, see ye be first furnished with grasses, clay and moss clothes, or barks of fallow to bind likewise withall. And ye must have a small saw, and a sharp knife, to cleave and cut grasses withall. But it were much better if you should cut your grasses with a great pen knife or some other like sharp knife, having also a small wedge of hard wood, or of Iron, with a hooked knife, and also a small mallet. And your wild Rocks must be well rooted before ye do graffe them: and be not so quick to deceive your selves, as those which do graffe and plant all at one time; yet they shall not profit so well; for where the wild stock hath not substance in himselfe, much lesse to give unto the other grasses, for when a man thinks sometime to forward himselfe, ye doth hinder himselfe.

Of grasses not prospering the first yeare.

YE shall understand, that very hardly your grasses shall prosper after, if they doe profit or prosper well in the first yeare; for whensoever (in the first yeare) they profit well, it were better to graffe them somewhat lower then to let them so remaine and grow.

For to graffe well and sound.

And for the best understanding of grafting in the cleft, ye shall first cut away all the small Cions above the body of the stock beneath, and before ye begin to cleave your stock, dresse and cut your grasses somewhat thick and ready; then cleave your stock, and as the cleft is small or great (if need be) part it smooth within; then cut your incision of your grasses accordingly, and set them in the clefts as even and as close as you can possibly.

How to trim your grasses.

YE may graffe your grasses full as long as two or three trunchions, or cut grasses, which ye may likewise graffe withall very well, and be as good as those which do come of old wood, and often times better, as to graffe a bough; for often it so happeneth, a man shall find of Oylts or eyes hard by the old slender wood, yet better

better it were to cut the ¹¹ off with the old wood, and chuse a better and fairer place at some other eye in the same graffe, and to make your incision thereunder, as aforesaid, and cut your graffes in making the incision on the one side narrow, and on the other side broad, and the inner side thin, and the out side thick, because the outside (of your graff:) must joyne within the cleft, with the sap of the barke of the wild stock, and it shall be so set in. See also that ye cut it smooth as your clefts are in the stock, in joyning at every place both even and close, and especially the joynts or corners of the graffes on the head of the stock, which must be well and cleane pared before, and then set fast therein.

How to cut graffes for Cherries and Plums.

IT is not much requisite in the Healeme Cherry, for to joyne the graffes (in the stock) wholly throughout, as it is in others, or to cut the graffes of great Cherries, Damsons, or Plums, so thin and plain as ye may other graffes, for these sorts have a greater sap or pith within, the which ye must alwaies take heed in cutting it too nigh on the one side, or on the other, but at the end thereof chiefly to be thin cut and fl. t.

Note also.

ANd yet if the said incision be straighter and closer on the one side then on the other side, pare it where it is most meet, and where it is too straight open it with a wedge of Iron, and put in a wedge of the same wood about in the cleft, and thus may ye moderate your graffes as ye shall see cause.

How in graffing to take heed that the bark do not rise.

IN all kind of cutting your graffes, take heed to the bark of your graffes that it do not rise (from the wood) on no side thereof, and specially on the outside, therefore ye shall leave it thicker then the inner side: Also ye must take heed when as the stocks do wreath in cleaving, that ye may joyne the graffe therein accordingly: the best remedy therefore is to cut it smooth within, that the graffe may joyne the better: ye shall also unto the greatest stock, chuse for them the greatest graffes.

How to cut your stocks.

HOW much the more your stock is thin and slender, so much more ye ought to cut him lower, and if your stock be as great as your finger, or thereabouts, ye may cut him a foot or halfe a foot from the earth, and dig him about, and dung him with Goats

dung, to helpe him wichall, and graffe him but with one graffe or Cion.

If the wild stocke be great and slender.

IF your wild stock be great, or as a big as a good staffe, ye shal cut him round off, a foot or thereabouts above the earth, then set two good graffes in the head or cleft thereof.

Trees as great as one arme.

WHen your stock is as great as your arme, ye shall saw him off three or four foot, or thereabouts, from the earth, for to defend him, and set in the head three graffes, two in the cleft, and one betwixt the barke and the tree, on that side where ye may have moit space.

Great trees as big as your leg.

IF the stock be as bigge as your leg, or thereabouts, ye shall saw him faire and clean off, four or five foot high from the earth, and cleave him acrofs (if ye will) and set in four graffes in the clefts, thereof, or else one cleft onely, and set two graffes in both the sides thereof, and other two graffes betwixt the barke and the tree.

When the graffes be pinched with the stocke.

YE must for the better understanding, marke the graffe betwixt the bark and the tree; for when the sap is full in the wood of wild stocks being great, then they do commonly pinch or wring the graffes too sore, if ye do not put a small wedge of green wood in the cleft thereof, to helpe them wichall againit such danger.

How ye ought to cleave your stocke.

Whensoever ye shal cleave your wild stock, take heed that ye cleave them not in the midst of the heart or pith, but a little on the one side, which ye shall think good.

How to graffe the branches of great trees

VVhensoever ye would graffe great trees, as great as your thigh or greater, it were much better to graffe the branches thereof, then the stock or body; for the stock will rot before the graffes shall cover the head.

How to cut branches old and great.

IF the banches be too rude, and without order, the best shall be to cut them all off, and within three or four years after they will bring faire new Cions againe, and then it shall be best to graffe them,

them, and cut off all the superfluous and ill branches thereof.

How ye ought to bind your graffes throughout for fear of winds.

ANd when your graffes shall be grown, ye must bind them, for fear of shaking of the wind; and if the tree be free and good of himselfe, let the Cions grow still, and ye may graffe any part or branch ye will in the cleft, or betwixt the barke and the tree, either in the Scutchion, if your bark be fair and loosed.

To set many graffes in one cleft.

WHen ye will put many graffes in one cleft, see that one incision (of your graffe) be as large as the other, not to be put into the cleft so slightly and rashly, and that one side thereof be not more open then the other, & that these graffs be all of one length: it shall suffice also, if they have three eyes one each graffe without the joynt thereof.

How to saw your stock before ye cleave him.

IN sawing your stock, see that ye tear not the bark about the head thereof, then cleave his head with a long sharp knife, or such like, and knock your wedge in the midst thereof, (then pare him on the head round about) and knock your wedge in so deep till it open meet for your graffes, but not so wide; then holding in one hand your graffe, and in the other hand your stock, set your graffe in cleft, bark to bark, and let your wedge be great above at the head, that ye may knock him out fair and easily again.

If the stocke cleave to much, or the barke do open.

IF the stock do cleave too much, or open the bark with the wood too low, then softly open your stock with your wedge, and see if your incision of your graffe be meet and just according to the cleft; if not, make it untill it be meet, or else saw him off lower.

How graffes never lightly take.

ABove all things ye must consider the meeting of the two saps, betwixt the graffe and the wild stock, which must be set in just one with another: for ye shall understand, if they do not joyn, and the one delight with the other, being even set, they shall never take together, for there is nothing to joyne their increase, but onely the sap, recounting the one against the other.

How to set the graffes right in the cleft.

VVHen the barke of the stock is thicker then the graffe, ye must take good heed, of the setting in of the graffe in the

the cleft, to the end that his sap may joyn right with the sap of the stock, on the inside; and ye ought likewise to consider of the sap of the stock, if ye do surmount the graffes on the outsides of the cleft too much, or not.

Of setting in the graffes.

Also ye must take good heed, that the graffes be well and clean set in, and joyn close upon the head of the stock. Likewise that the incision which is set in the cleft, do joyne very well within on both sides, but sometimes it may do service, when as the graffes do draw too much from the stock, or the stock also on the graffes do put forth.

Note also.

When the stock is rightly cloyen, there is no danger in cutting the incision of the graffes, but a little straight rebated to the end thereof, that the sap may joyne one with the other, the better and closer together.

How ye ought to draw out your wedge.

When your graffes shal be wel joyned with the stocks, draw your wedge faire and softly forth, for fear of displacing your graffes, ye may leave within the cleft a small wedge of such green wood as is aforesaid, and ye shall cut it off close by the head of your stock, and so cover it with a bark as followeth.

To cover your clefts on the head.

When your wedge is drawne forth, put a green pill of thick barke of Willow, Crab, or Apple, upon your clefts of the stocks, that nothing do fall between: then cover all about the clefts on the stock head, two fingers thick with good Clay, or nigh about that thicknesse, that no wind nor raine may enter. Then cover it round with good Moss, and then wreath it over with clothes, or peels of Willow, Brier or Oziars, or such like, then bind them fast, and stick certain long pricks on the graffes head amongst your Cions, to defend them from the Crows, Jayes, or such like.

How ye ought to see to the binding of your Graffes.

But alwaies take good heed to the binding of your heads that they wax not slack or shag, neither on the one side or other, but remain fast upon the Clay, which Clay must remaine fast (likewise on the stock head) under the binding thereof; wherefore the said Clay must be moderated in such sort as followeth.

How

How ye ought to temper your Clay.

THe best way therefore is to try your clay between your hands, for stones and such like, and so to temper it as ye shall thinke good, if so it require of moistnesse or drynesse, and to temper it with the haire of beasts: for when it dryeth, it holdeth not (o her- wife) so well on the stock, or if yeknead of Mosse therewith, or mingle Hay thin therewith: some do judge that the Moss doth make the tree moist; But I think (saith he) that commeth of the disposition of place.

To bush your graffe head.

WHen ye shall bind or wrap your graffe head with a band, take small thornies, and bind them within, for to defend your graffes from Kites or Crows, or danger of other fowles, or pr prick sharp white sticks thereon.

The second way to graffe bigg branches on trees.

THe second manner to graffe, is strange enough to many: This kind of graffing is on the tops of branches of Trees: which thing to make them grow lightly, is not so soon obtained: where- soever they be graffed, they do onely require a faire young wood, a great Cion or twig, growing highest in the tree top, which Cions ye shall chuse to graffe on, of as many sorts of fruit as ye wil, as ye shall think good, which order followeth.

TAke graffs of other sorts of tree, which you will graffe in the top thereof then mount to the top of the tress which ye would graffe, and cut off the tops of all such branches, or as many as ye would graffe on, and if they be grater then the graffes, which ye would graffe, ye shall cut and graffe them lower as ye do the small wild stock afore said. But if the Cions that you cut be as great as your graffe that you graffe on, ye shall cut them lower betwixt the old wood and the new, or a little more higher or lower: then cleave a little, and chuse your graffes in the like sort, which ye would plant, whereof ye shall make the incision short, with the bark on both sides like, and as thick on the one side as the other, and set so just in the cleft, that the bark may be even and close, as wel above as beneath, on the one side as the other, and so bind him as is afore said. It shall suffice that every graffe have an oylet; or eye, or two at the most, without the joynt, for to leave them too long it shall not be good, and ye must dresse it with Clay and Mosse, and bind it, as is afore said. And likewise ye may Graffe these, as

ye do the little wild stocks, which should be at great as your graffs, and to graffe them, as ye do those with Sap like on both sides, but then ye must graffe them in the earth, as three fingers of, or thereabouts.

The manner of Graffing of graffes which may be set betwixt the barke and the Tree.

To graffe betwixt the barke and the Tree.

THis manner of graffing is good, when trees do begin to enter into their Sap, which is about the end of *February*, unto the end of *April*, and especially on great wild stocks, which be hard to cleave, ye may set in foue or five graffes in the head thereof, which graffes ought to be gathered afore, and kept close in the earth till then, for by that time aforesaid, ye shall scanty find a tree, but that he doth put forth or bud, as the Apple called *Capendu*, or such like. Ye must therefore saw these wild stocks, more chauncily, and higher, so they be great, and then cut the graffs which ye would set together, so as you would set them upon the wild stock that is cleft, as is aforesaid. And the inclosed of your graffes must not be so long, nor so thick, and the bark a little at the end thereof must be taken away, and made in manner as a Launcet of Iron, and as thick on the one side as the other.

How to dresse the head, to place the graffes betwixt the bark and the tree.

AND when your graffes be ready cut, then shall ye cleanse the head of your stock, and pare it with a sharp knife, round about the barke thereof; to the end your graffes may joyne the better thereon; then by and by take a sharp pen-knife, or other sharpe pointed knife, and thrust it dow betwixt the bark and the stock, so long as the incision of your graffes be, then put your graffs softly down therein in the hard joynt: and see that it doth sit close upon the stock head.

How to cover the head of your stocke

WHen as ye have set in your graffes, ye must then cover it well about with good tough Clay and Mosse, as is said of the others, and then you must incontinent environ or compass your head with small thorny bushes, and bind them fast thereon all about for fear of great birds, and likewise the wind.

Of the manner of graffing in the Shield or Scutchion.

THe fourth manner to graffe, which is the last, is to graffe in the Scutchion, in the sap, in Sommer, from about the end of the moneth of *May*, until *August*, when as tree be yet strong in sap and leaves, for otherwaies it cannot be done, the best time is in *June* and *July*, so it is some years when the time is very dry, that some trees do hold their sap very long, therefore ye must tarry till it returne.

For to graffe in Sommer so long as the trees be full leaved.

FOr to begin this manner of graffing well, ye must in Sommer when the trees be almost ful of sap, and when they have sprang forth new shouts, being somewhat hardned, take a branch thereof in the top of the tree, the which ye will have graffed, and chuse the highest and the principallest branches, without cutting it from the old wood, and chuse thereof the principallest oylet or eye or budding place, of each branch one, within which oylet or eye ye shal begin to graffe as followeth.

The big Cions are best to graffe.

Primally ye must understand, that the smallest and naughty oylets or buds of the said Cions be not so good to graffe, therefore chuse the greatest and best ye can find; first cut off the leafe hard by the oylet, then ye shal trench or cut (the length of a barley corne) beneath the oylet round about the bark, hard to the wood, and so likewise above: then with the sharp point of a knife, slit it down half an inch beside the oylet or bud, and with the point of a sharp knife softly raise the said shield or Scutchion round about, with the oylet in the midst, and all the sap belonging thereunto.

How to take of the shield from the wood.

And for the better raising your said shield or Scutchion from the wood, after that ye have cut him round about, and then slit him down, without cutting any part of the wood within, ye must then raise the side next you that is slit, and take the same shield betwixt your fingers and thumb, and pluck or raise it softly off, without breaking or brusing any part thereof, and in the opening or plucking it off, hold it with your finger hard on the wood, to the end the sap of the oylet may remain in the shield, for if it go off (in plucking it) from the barke, and stick to the wood, your Scutchion is nothing worth.

To know your Scutchion or shield when he is good or bad.

ANd for the more easie understanding, if it be good or bad, when it is taken from the wood, look within the said shield, and if ye shall see it crack, or open within, then it is of no value, for the chief sap doth yet remain behind with the wood, which should be in the shield, and therefore ye must chuse and cut another shield, which must be good and sound, as aforesaid, and when your Scutchion shall be wel taken off from the wood, then hold it dry by the oylet or eye betwixt your lips, until you have cut and taken off the barke from the other Cion or branch, and set him in that place, and look that ye do not foule or wet it in your mouth.

Of young trees to graffe on.

BUt ye must graffe on such trees, as be from the bignesse of your litle finger, unto as great as your arme, having their barke thin and slender, for great trees commonly have their barke hard and thick, which ye cannot well graffe this way, except they have some branches with a thin smooth bark, meet for this way to be done.

How to set or plant your shield

YE must quickly cut off round the bark of the tree that ye will graffe on, a little longer then the shield that ye set on, because it may joyne the sooner and easier, but take heed that in cutting off the bark, ye cut not the wood within.

Note also.

AFTER the incision once done, ye must then cover both the sides or ends well and softly with all, with a little bone or horn, made in manner like a thin skin, which ye shall lay all over the joynts or closings of the said shield, somewhat longer and larger, but take heed for hurting or crushing the bark thereof.

How to lift up the barke, and to set your shield on.

THIS done, take your shield or Scutchion, by the oylet or eye that he hath, and open him faire and softly by the two sides, and put them straight way on the other tree, whereas the bark is taken of, and joyne him close barke to barke thereon; then plain it softly above and at both the ends with the thin bone, and that they joyn above and beneath bark to bark, so that he may feed well the branch of that tree.

How

How to bind on your shield.

THis done, ye must have a wreath of good hemp, to bind the said shield on his place: the manner to bind it is this, ye shall make a wreath of hemp together as great as a Goose-quill, or thereabouts, or according to the bigness or smallness of your tree: then take your hemp in the midst, that the one halfe may serve for the upper halfe of the shield, in winding and crossing (with the hemp) the said shield on the branch of the tree, but see that ye bind it not too straight, for it shall let him from taking or springing, and likewise their sap cannot easily come or passe from the one to the other: and see also that wet come not to your shield, nor likewise the hemp that ye bind it withal: Ye shall begin to bind your Scutchion first behind in the midst of your shield, in coming still lower and lower, and so recover under the oylet and taile of your shield, binding it nigh together, without recovering of the said oylet, then ye shall returne again upward, in binding it backward to the midst where ye began. Then take the other part of the hemp, and bind so likewise the upper of your shield, and encrease your hemp as ye shall need, and so returne againe backward, and ye shall bind it so, till the fruits or clefts be covered (both above and beneath) with your said hemp, except the oylet and his taile, the which ye must not cover, for that taile will shed apart, if the shield do take.

On one tree ye may graffe or put two or three shields.

YE may very well if ye will, on every tree graffe two or three shields, but see that one be not right against the other, nor yet of the one side of the tree; let your shields so remain bound on the trees, one moneth or more, after they be graffed, and the greater the tree is, the longer to remain, and the smaller the lesser time.

The time to unbind your shield.

ANd then after one moneth, or six weeks past, ye must unbind the shield, or at the least cut the hemp behind the tree, and let so remaine the Winter next following, and then about the moneth of *March* or *April* if ye will, or when ye shall see the sap of the shield put forth, then cut the branch off three fingers above the shield, or thereabouts.

How to cut and govern the branches graffed on the trees.

Then in the next year after that the Cions shall be well strengthened, and when they do begin to spring, then shall ye cut them

them all hard off, by the shield above; for if he had cut them so nigh in the first year, when they began first to spring or bud, it should greatly hinder them against their increase of growing: also when those Cions shall put forth a faire wood, ye must bind and stay them in the midst, faire and gently with small wands, or such like, that the wind and weather hurt them not. And after this manner of graffing, which is practised in th shield or Scutchion way ye may easily graffe the White Rose on the Red; and likewise ye may have Roses of divers colours and sorts, upon one branch or root. This I thought sufficient and meet to declare of this kind of graffing at this this present.

CHAP. VI.

This Chapter treateth of transplanting or altering of Trees.

The sooner ye transplant or set them, it shall be the better.



Ye ought to transplant or set your trees from *Alballon-side* unto *March*, and the sooner the better, for as soon as the leaves are fallen from the trees, they be meet for to be planted, if it be not in a very cold or moist place, the which then it were best for to tarry unto *January* or *February*: to plant in the frost is not good.

To plant or set towards the South, or sunnie place is best.

Afore ye do pluck up your trees for to plant them, if ye will marke the South side of each tree, that when ye shal re-plant them, ye may set them again as they stood before, which is the best way as some do say. Also if ye keep them a certain time, After they be taken out of the earth, before ye plant them again, they wil rather recover there in the earth, so they be not wet with rain, nor otherwise; for that shall be more contrary to them, then the great heat or drought.

How to cut the branches of trees, before they be set,

Whensoever ye shall set or re-plant your tree, first ye must cut off the boughes, and especially those which are great branches, in such sort that ye shall leave the small twigs or sprigs on the

the stocks of your branch, which must be but a shaftment long, or somewhat more, or else, according as the tree shall require, which ye do set.

Apple trees commonly must be disbranched before they be replanted or set.

ANd chiefly the Apple trees, being Graffed or not Graffed, do require to be disbranched before they be set again; for they shall prosper thereby much better: the other sort of trees may wel passe unbranch'd, if they have not too great or large branches: and therefore it shall be good to transplant or set as soon after as the graffes are closed, on the head of the wild stock: as for small trees, which have but one Cion or twig, it needs not to cut them above, when they be replanted or removed.

All wild stocks must be disbranched when they are replanted or set.

All wild trees or stocks, which ye thinke for to graffe on, ye must first cut off all their branches before ye set them again: also it shall be good, alwaies to take heed in replanting your trees, that ye do set them again in as good or better earth then they were in before, and so every Tree according as his nature doth require.

What trees love the faire Sunne, what trees the cold aire.

Commonly the most part of trees do love the Sunne at Noone, and yet the South wind (*or vent d'aual*) is very contrary against their nature, and specially the Almond tree, the Apricot, the Mulberry tree, the Fig tree, and the Pomgranade tree. Certaine other trees there be which love cold aire, as these: The Chestnut tree, the wild and eager Chery tree, the Quince tree, & the Damson or Plum tree, the Walnut loveth cold aire & a stony white ground. Peare trees love not greatly plain places, they prosper wel enough in places closed with walls, or high hedges, and specially the Pear called *bon Christen*.

Of many sorts and manner of trees, following their nature.

The Damsons or Plum tree doth love a cold fat earth, and clay withall, the (Healme) great Chery doth love to be set or planted upon clay. The Pine tree loveth light earth, stonie and sandy. The Medlar commeth well enough in all kind of grounds, and doth not hinder his fruit, to be in shadow and moist places. Hasel nut trees love the place to be cold, leane, moist and sandy; Ye shall understand, that every kinde of fruitfull tree doth love

love, and is more fruitful in one place, then another, as according unto their nature. Nevertheless yet we ought to nourish them (all that we may) in the place where we set them in, in taking them from the place and ground they were in. And ye must also consider when one doth plant them, of the great and largest kind of trees, that every kind of tree may prosper and grow, and it is to be considered also, if the trees have commonly grown afore so large in the ground or nor; for in good earth the trees may wel prosper and grow, having a good space one from another, more then if the ground were lean and naught.

How to place or set trees at large.

IN this thing ye shall consider, ye must give a competent space from one tree to another, when as ye make the holes to set them in, not nigh, nor that one tree touch the other. For a good tree planted, or set well at large, it profiteth oftentimes more of fruit then three or foure trees, set too nigh together. The greatest and largest trees commonly are Walnuts, and Chestnuts, if ye plant them severally in rank, as they do commonly grow upon high waies, besides hedges and fields; they must be set 35. foot a sunder, one from another, or thereabouts, but if ye wil plant many ranks in one place together, ye must set them the space of 45. foot one from another, or thereabouts, and so farre ye must set your ranks one from another. For the Pear trees and Apple trees, and other sort of tees, which may be set of this largenesse one from the other, if ye do plant onely in ranks by hedges in the fields or otherwise, it shall be sufficient of 20. foot one from another. But if ye will set two ranks upon the sides of your great Allyes in gardens, which be of ten or twelve foot broad, it shall be then best to give them more space, the one from the other in each rank, as about 25. foot; also ye must not set your Trees right one against the other, but entermedling or between every space, as they may best grow at large, that if need be, ye may plant of other smaller trees between, but see that ye set them not too thick. If ye list to set or plant all your trees of one bignesse, as of young trees like rods, being Pear trees, or Apple trees, they must be set a good space one from another, as of twenty or thirty foot in square, as to say, from one rank to another. For to plant or set of smaller trees, as Plum trees, Apple trees, of the like bignesse, it shall be sufficient for them fourteen or fifteen foot space in quarters. But if ye will plant or set

two ranks, in your Allies in Gardens, ye must devise for to proportion it after the largeness of your said Allies. For to plant or set eager or sower Chery trees, this space shall be sufficient enough the one from the other, that is, of ten or twelve foot, and therefore if you make of great or large Allies in your Garden, as of ten foot wide, or thereabouts, they shall come well to passe, and shall be sufficient to plant your trees, of nine or ten foot space: and for the other lesser sorts of treee, as of Quince trees, Figge trees, Nut trees, and such like, which be not commonly planted, but in one ranke together.

Ordering your trees.

When that ye plant or set ranks, or every kind of trees together, ye shall set or plant the smallest towards the Sun, and the greatest in the shade, that they may not annoy or hurt the small, nor the small the great. And whensoever ye wil plant or set Peare trees, and Plum trees (in any place) the one with another, better it were to set the Plum trees next the Sunne, for the Peares wil dure better in the shade. Also ye must understand, when ye set or plant any ranks and trees together, ye must have more space betwixt your ranks and trees, (then when ye set but one ranke) that they may have room sufficient on every side.

Ye shall also soarely set or plant Pear trees, or Apple trees, or other great Trees, upon dead or Mossie barren ground unstirred, for they increase thereon to no purpose. But other lesser trees very well may grow, as Plum trees, and such like: now when all the said things above be considered, ye shall make your holes according to the space that shall be required of every tree that ye shall plant or set, and also the place meet for the same so much as ye may convenient, ye shall make your holes large enough; for ye must suppose the tree ye do set, hath not the halfe of his roots he shall have hereafter, therefore ye must help him and give him of good fat earth, (or dung) all about the roots when as ye plant him. And if any of the same roots be too long, and bruised and hurt, ye shall cut them clean off slope wise, so that the upper side of each root so cut, may be longest in setting, and for the smal roots which come forth all about thereof, ye may not cut them off as the great roots.

How ye ought to enlarge the holes for your trees when ye plant them.

When as ye set the trees in the holes, ye must then enlarge the roots in placing them, and see that they take all downwards, without turning any roots the end upwards; and ye must not plant or set them too deep in the earth, but as ye shall see cause. It shall be sufficient for them to be planted or set (halfe a foot, or thereabouts) in the earth, so that the earth be above all the roots halfe a foot or more, if the place be not very burning and stony.

Of dung and good earth, for your Plants and trees.

And when as ye would replant or set, ye must have of good fat earth or dung, well mingled with a part of the same earth, whereas ye took your plants out of, with all the upper crests of the earth, as thick as ye can have it: the said earth which ye shall put about the roots, must not be put to nigh the roots, for doubt of the dung being laid to nigh, which wil put the said roots in a heat, but let it be wel mingled with the other earth, and wel tempered in the holes, and the smallest and slenderest Cions that turn up among those roots, ye may plant therewith very well.

If ye have wormes amongst the earth of your roots.

If there be worms in the fat earth or dung, that ye put about your roots, ye must mingle it well also with the dung of Oxen or Kine, or slekt Sops ashes about the root, which will make the worms to die, for otherwise they greatly hurt the roots.

To digge well the earth about the tree roots.

Also ye must dig well the earth, principally all round about the roots, and more often if they drie, then if they be wet; ye must not plant or set trees when it raineth, nor let the earth be very moist about the roots. The trees that be planted or set in vallies, commonly prosper wel by drought; and when it raineth, they that be on the hills are better by watering by drops then others; but if the place or ground be moist of nature, ye must plant or set your trees the deeper thereon.

The nature of the place.

ON high and drie places, ye must plant or set your trees a little more deep, then in the vallies; and ye must not fill the holes in high places, so full as the other, to the end that the rain may better moisten them,

Of good earth.

YE shal understand that of good earth commonly cometh good fruit; but in certain places (if that they might be suffered to grow) they would season the tree the better. Otherwise they shall not come to proof, nor yet have a good tast.

With what ye ought to bind your trees

Whensoever your trees shal be replanted or set, ye must knock in (by the root) a stake, and bind your trees thereto for fear of the wind: and when they do spring, ye shall dresse them and bind them with bands that may not break, which bands may be of strong soft herbs, as Bulrushes or such like; or of old linen clouts, if the other be not strong enough; or else ye may bind them with Oziars, or such like, but for fear of fretting or hurting your trees.

CHAP. VII.

This Chapter treateth of medicining and keeping the Trees when they are planted.

The first counsel is, when your trees be but plants (in drie weather) they must be watered

THe young trees which be newly planted, must sometimes in Summer be watered when the time waxeth drie, at the least the first year after they be planted or set. But as for other greater trees which are wel taken & rooted a good time, ye must dig them all over the roots after *Alballontide*, and uncover them four or five foot compass about the root of the tree; and let them so lie uncovered until the latter end of Winter. And if ye do then mingle about each tree of good fat earth or dung, to heat and comfort the earth withall, it shall be good.

With what dung ye ought to dung your trees.

ANd principally unto Mossie trees, dung them with Hogs dung mingled with other earth of the same ground, & let the dung of Oxen be next about the roots; and ye shall also abate the Moss of the tree with a great knife of wood, or such like, so that ye hurt not the bark thereof.

When ye ought to uncover your trees in Summer.

IN the time of Summer, when the earth is scanty halfe moist, it shall be good to dig at the foot of the trees, all about the roots of

such as have not been uncovered in the Winter before, and to mingle it with good fat earth: and to fill it againe, and they shall do well.

When ye ought to cut or prune your trees.

ANd if there be in your trees certaine branches of superfluous wood, that ye will cut off, tarry until the time of the entering in of the sap, that is, when they begin to bud, as in *March* and *April*: Then cut off as ye shall see cause, all such superfluous branches hard by the tree, that thereby the other branches may prosper the better, for then they shall sooner close the sap upon the cut places then in the Winter, which should not do so well to cut them, as certain do teach which have not good experience. But for so much as in this time trees be entering into the sap, as is aforesaid; Take heed therefore in cutting then off your great branches hastily that through their great weight, they do not cleave or separate the bark from the tree, in any part thereof.

How to cut your great branches and when.

ANd for the better remedy: First you shall cut the same great branches, halfe a foot from the tree, and after to saw the rest clean hard by the body of the tree, then with a broad Chisel, cut all clean and smooth upon that place, then cover it with Ox dung. Ye may also cut them well in winter, so that ye leave the Trunk or branch somewhat longer, so as ye may dresse and cut them again in March and April, as is before mentioned.

How ye ought to leave the great branches cut.

Other things here are to be shewed of certaine great and old trees onely, which in cutting the great branches thereof trunchion wise, do renew again, as Walnuts, Mulbery trees, Plum trees, Chery trees, with others, which ye must disbranch the boughes thereof, even after *Alballomide*, or as soon as their leaves be fallen off, and likewise before they begin to enter into Sap.

Of trees having great branches.

THe said great branches when ye shall disbranch them, ye shall so cut them off in such Trunchions, to lengthen the tree, that the one may be longer then the other, that when the Cions be grown good and long thereon, ye may graffe on them again as ye shall see cause, according as every arme shall require.

Of barrennesse of trees, the time of cutting ill branches, and of uncovering the roots.

Sometimes a man hath certain old trees, which be almost spent, as of the Pear trees, and Plum trees, and other great trees, the which bare scant of fruit; but when as ye shall see some branches well charged therewith, then ye ought to cut off all the other ill branches and boughes, to the end that those that remain may have the more sap to nourish their fruit, and also to uncover their roots after *Alballonside*, and to cleave the greatest roots thereof (a foot from the trunk) and put into the said clefts, a thin slate of hard stone; there let it remaine, to the end that the humour of the tree may enter out thereby, and at the end of Winter, ye shall cover him againe, with as good and fat earth as ye can get, and let the stone alone.

Trees which ye must helpe, or cluck up by the roots.

Al sorts of trees which spring Cions from the roots, as Plum trees, all kind of Chery trees, and small Nut trees, ye must helpe in plucking their Cions from the roots in Winter, as soon as conveniently ye can, after the leaflets fallen. For they do greatly pluck down and weaken the said trees, in drawing to them the substance of the earth:

What daib make a good Nut,

But chiefly to plant these Cions, the best way is to let them grow and be nourished two or three years from the root, and then to transplant them or set them in the Winter, as is aforesaid. The Cions which be taken from the foot of the Hasell tree, make good Nuts, and be of much strength and vertue, when they are not suffered to grow to long from the root, or foot aforesaid.

Trees eaten with beasts, must be grafted againe.

When certaine grasses being well in Sap, of three or foure years or thereabouts be broken, or greatly endamaged with beasts, which have broken thereof, it shall little profit to leave those grasses so, but it were better to cut them, and to graffe them higher or lower then they were before. For the grasses shall take as well upon the new as old Cion being grafted on the wild stock: But it shall not so soon close, as upon the wild stock head.

How your wild stocks ought not hastily to be removed.

JN the beginning when ye have grafted your grasses on the wild stock, do not then hastily pluck up those Cions, or wild stocks

so grafted, untill ye shall see the gresses put forth a new shoot, the which remaining still, ye may gresse thereon again, so that your gresses in hasty removing any chance to die.

When to cut off the naughty Cions from the wood.

When your gresses on the stocks shal put forth new wood, or a new shoot, as of two or three foot long, and if they put forth also of other small superfluous Cions (about the said members or branches that ye would nourish) cut off all such ill Cions hard by the head, in the same year they are grafted in, but not so long as the wood is in sap, till the winter after.

How sometimes to cut the principall members.

Also it is good to cut some of the principall members or branches, in the first year, if they have too many, and then again, withln two or three years after, when they shall be well sprung up, and the gresses well closed on the head of the stock, ye may trim or dresse them again, in taking away the superfluous branches, if any there remain; for it is sufficient enough to nourish a young tree to leave him one principal member on the head, so that he may be one of those, that have been grafted on the tree before, yea, and the tree shall be fairer and better in the end then if he had two or three branches, at the foot. But if the tree have been grafted with many great Cions, then ye must leave him more largely, according as ye shall see cause or need, to recover the clefts on the head of the said gresse or stock,

How to guide and govern the said tree.

Vhen that your trees do begin to spring, ye must order and see to them wel, the space of three or four years, or more, untill they be well and strongly grown, in helping them above, in cutting the smal twigs and superfluous wood, untill they be so high without branches as a man, or more if it need be, and then see to them well, in placing the principall branches, if need be, with forks or wands prickt right and well about them at the foot, and to prune them, so that one branch do not approach too nigh the other, nor yet fret one the other, when as they do inlarge and grow, and ye must cut off certaine branches in the tree, whereas they are thickest.

A kinde of sicknesse in trees.

Vhen certain trees are sick of the Gall, which is a kind of sicknesse that doth eat the bark, there ye must cut it,
[and

and take out all the same infection with a Chisel, or such like thing. This must be done at the end of Winter, then put on that infected place of Ox dung, or Hogs dung, and bind it fast thereon with clouts; and wrap it with Oziars, so let it remaine a long time, till It shall recover again.

Trees which have worms in the barke.

OF trees which have wormes within their barks, whereas ye shall see a swelling or rising therein, there ye must cleave the said bark unto the wood, to the end the humour may also distil out thereat, and with a little hook ye must pluck or draw out the said wormes, with all the rotten wood that ye can see; then shall ye put upon the said place, a plaister made of Ox dung, or Hogs dung mingled and beaten with Sage, and a little of unslacked Lime, then let it be wel blended together, and spread it on a cloth, and bind it fast and close thereon so long as it will hold. The Lees of Wine shed or poured upon the roots of tree (the which be somewhat sick through the coldnesse of the earth) doth them much good.

Snayles, Ants and Wormes doth mar trees.

ALso ye must take heed of all manner of young trees, and specially of those graffes, the which many worms and Flyes do endamage and hurt in the time of Sommer; those are the Snayles, the Pismires, or Ants: the field Snayle which hurteth also all other sorts of trees that be great, principally in the time that the Cuckow doth sing, and betwixt *April* and *Midsomer*, while they be tender. There be little beasts called Sowes, which have may legs, and some of them be gray, some black, and some have a long sharpe snout; which be very noysome, and great hurters of young graffes, and other young trees also, for they cut off in eating the tender tops, (of the young Cions) as long as ones finger.

How ye ought to take the said worms

FOr to take them well, ye must take heed and watch in the heat of the day (your young trees) and where you shall see any, put you hand softly underneath, without shaking the tree, for they will sodainly fall when one thinks to take them) therefore so soon as ye can, (that they flie not away nor fall) take him (quickly on the Cion) with your other hand.

To keepe Ants from young trees.

FOr to keepe the young trees from Snailes and Ants, it shall be good to take Ashes and to mingle unslackt Lime, beaten in powder therewith, then lay it all about the root of the tree, and when it raineth, they shall be beaten down into the Ashes and die: but ye must renew your Ashes after every raine from time to time; also to keepe them moist, ye must put certain small vessels full of water at the foot of your said trees, and also the Lees of Wine, to be spread on the ground there all abouts. For the best destroying of the small snailes on trees, ye must take good heed in the spring times before the trees be leaved; then if ye shall see as it were small warts, knobs or branches on the trees, the same will be snailes. Provide to take them away faire and softly, before they be full closed, and take heed that ye hurt not the wood or barke of the said tree as little as ye can; then burn those branches on the earth, or all to tread them under your feet, and then if any do remain or renew, look in the heat of the day, and if ye can see any, which will commonly be one the clefts or forks of the branches, and also upon the branches lying like tofts or tops together, then wrap your hands all over with old clothes (and bind leaves beneath them, and above them) and with your two hands rub them down therein, and straight way fire it, if ye do not quickly with diligence, they will fall, and if they fall on the earth, ye cannot lightly kill them, but they will renew againe: these kind of worms are noisome, Flies which be very strange, therefore take heed that they do not cast a certain rednesse on your face and body; and whereas there be many of them, they be dangerous: it is strange to tell of these kind of Worms, if ye come under or among the trees whereas be many, they will cast your face and hand (your covered body, as your neck, brast and arms) full of small spots, some red, some black, some blewish, which wil so tingle and trouble you like Nettles, sometimes for a day, or a day and a night after: they be most on Plum trees, and Apple trees, nigh unto moist places, and ill airs: yet nevertheless by the grace of God there is no danger (that I understand) to be taken by them. Ye shall understand, that if it be in the evening, or in the morning, when it raineth, they remaine about the grafting place of the tree, therefore it will be hard to find them, because they are so small. Moreover, if such branches do remain in the upper part of the boughes or tree

Planting and Graffing.

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ye shall put drie straw under the boughes, then with a wisp on a poles end, first on all and burn them.

A note in Spring time of Fumigations.

Here is to be understood and noted, that in the Spring time nly, when trees do begin to put forth leaves and blossoms ye must then alwaies take heed unto them, for to defend them from the frost (if there come any) with Fumigations or smokes, made on the wind side of your Orchards (or under your trees) with straw, hey, drie chaffe, dry Ox dung or saw-dust dried in an Oven, or Tanners Ozedried likewise, or *Galbanum*, or old shooes, thatch of houses or hale, and such like, one of these to be mingled with the other: all these be good against the Frost in the Spring time, and specially good against the East wind, which breedeth (as some say) the Caterpillar worme.

To defend trees from the Caterpillar.

Some do befend their trees from the Caterpillar, when the blossoming time is dried (if there be no frost) by casting of water, or salt water, every second or third day upon their trees (with instruments of the same, as with Squires of Wood or Brasse, or such like) for in keeping of them moist, the Caterpillar cannot breed thereon: this experience have I known proved of late to be good. For to conclude, he that will set or plant trees, must not passe for any paines, but have a pleasure and delight therein, in remembering the great profit that commeth thereby: Against scercenesse of Corne, fruit is a good stay for the poor, and often it hath been seen, one Acre of Orchard ground, worth fore Acres of Wheate ground.

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Here

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Here followeth a little Treatise, how one may
 Graffe & Plant artificially, and Dextrously, and
 to make many things very strange in Gardens.



Or to graffe a subtile way, take one oylet, or eye of
 a Graffe, slit it round above and beneath, and set then
 behind down right, wreath him off, and set him
 upon another Cion, as great as he is, then dresse him,
 as is afore said, and he shall grow and bare.

To graffe one Vine upon another.

FOr to graffe one Vine upon another, ye shall cleave him as ye
 do other trees, and then put the Vine graffe in the cleft, then
 stop him close and well with wax, and so bind him, and he shall
 grow.

If a tree be long without fruit.

YE shal uncover his root, and make a hole with a Piercer, or smal
 Auger, in the greatest root he hath, without pearling through
 the roote, then put in a pin (in the said hole) of dry wood (as Oak or
 Ash) and so let it remaine in the said hole, and stop it close again
 with wax, and then cast earth and cover him againe, and he shall
 beare the same yeare.

For to have Peaches two months before others.

TAke your Cions of a Peach tree that doth soone bloome in the
 Spring time, and graffe them upon a franke Mulbery tree, and
 he shall bring forth Peaches two months before others.

To have Damsons or other Plums till Albballantide.

EOr to have Damsons all the Summer long untill Albballantide,
 and of many other kind of sorts likewise, ye shall graffe
 them

them upon the Goosebery tree, upon the Franck Mulberry tree, and upon the Cherry tree, and they shall endure upon the trees till *Alballontide*.

To make Medlars, Cherries, and Peaches in eating to tast like spice.

FOr to make Medlars, Cherries and Peaches, to tast in the eating pleasant like spice, the which ye may also keepe until new come againe: ye shall graffe them upon the franke Mulberry tree, as I have afore declared, and in the graffing ye shall wet them in Hony, and put a little of the powder of some good spices, as a powder of Cloves, and Cinamon, or Ginger.

To make a Muscadell taste.

FOr to make a Muscadell taste, take a Gouge or Chisel of Iron, (and cut your sap round about.) then put in your Gouge or Chisel, under your sap on your Cion, and raise three eyes or oylers round a bout and so take off fair and softly your bark round a bout and when it is so taken off, anoint it all over within the bark, with pouders of Cloves or Nutmegs, then fast it on againe, and stop it close with wax round a bout, that no water may enter in, and within thrice bearing they shall bring a fair Muscadell Reison, which ye may after both graffe and plant, and they shall be all after a Muscadell fruit: some slits the barke downe, and so put in of Spice.

To set Apples and Pears to come without blossoming.

FOr to make Apples and Pears, and other sort of fruit to come without blossoming, that is ye shall graffe them (as ye doe other kind of fruit) upon the figtree.

To have Apples and Chestnuts rath, and also long on the trees.

FOr to have Apples called (in French) *de blanc Durel*, or *de Troal*, and Chestnuts very rath, and long (as unto *Alballontide*) on the trees, and to make such fruit also to endure the space of two years, ye shall graffe them on a latter ward fruit, as Pome Richard, or upon a Pear tree, or Apple tree of Dangoisse.

To have good Cherries on the trees at Alballontide.

TO have Cherries on many trees good for to eat unto *Alballontide*, ye shall graffe them uppon a franck Mulberry tree, and like wise to graffe them upon a Willow, or Sallow tree, and they shall endure unto *Alballontide* on the trees.

To have rath Medlers two months before others.

FOR to have Medlars two months sooner then others: and the one shall be better far then the other, ye shall graffe them upon a Goosebery tree, and also a francke Mulberry tree, and before ye do graffe them, ye shall wet them in honey, and then graffe them.

To have rath or timely Peares.

FOR to have a rath Pear, the which is in France, as the Pear *Cail-lones*, and the Pear *Hastimean*. For to have them rath or soon, ye shall graffe them on a Pine tree, And for to have them late, ye shall graffe them on the Pear called in France *Dangoisse*, or on other like hard Peares.

To have Misples or Medlers without stones.

FOR to have Medlers without stones, the which shall taste sweet as honey, ye shall graffe them as the other, upon an Englantine, or sweet Briar tree, and ye shall wet the graffes (before ye graffe them) in honey.

To have Peares betimes.

FOR to have the Peare *Anguisse*, or *Pearemaine*, or *Satege*, (which be of certaine places so called) a month or two before others, the which shall endure and be good until the new come again, ye shall graffe them upon a Quince tree, and like wise upon the franck Mulberry tree.

To have ripe and franck Mulberis very soone or late.

FOR to have franck or ripe Mulberis very soone, ye shall graffe them upon a rath Peare-tree, and upon the Goosebery tree, and to have very late, and to endure unto *Albollantide*, ye shall graffe them upon the Medler tree,

How to keepe Peare a yeares

YE shall take of fine Salt very drie. and put thereof with your Peares into a barrel, in such sort, that one Pear doth not touch another so fill the barrel if e list, then stop it, and let it be set in some drie place, that the Salt do not wax moist, thus ye may keepe them long and good.

To have your fruit tast halfe Apples, halfe Peares

IF ye will have your fruit tast halfe a Pear, and halfe an Apple, ye shall in the spring take graffer, the one a Pear, and the other an Apple, ye shall cleave or pare them in the grafting joynt or place, and joyne halfe the Pear Cion, and so set them into your stock

stock, and see wel that no raine do enter therein upon your joynts and that fruit shall bring the halfe a Peare and the other halfe an Apple in tast.

Time of graffings.

IT is good also to graffe one or two dayes before the change, and no more, for looke so many more daies, as ye shall graffe before them, so may more yeares it will be ere your trees shall bring fruit also it is good graffing all the increase of the Moon, but the sooner after the change the better.

To graffe the Quince Apple.

IF ye graffe the Quince Apple upon an Apple stocke, ye shall not long con clave without the canker, but to graffe him on a knotty young Crabstock, he shall endure long without the Canker.

To destroy Pismers, or Ants about a tree,

FOR to destroy Emits or Ants, which be about a tree, if ye remove and stir the earth all about the root of the said tree, then put thereon all about, a great quantity of the foot of a Chimpey and the Ants or Pismia s will either away, or else shortly die.

Another for the same.

YE shal take of the saw-dust of Oke-wood onely and straw that al about the tree root, and the next raine that doth come, all the Pismiers or Ants shall die there. For Earwigges shoes stopp with hay, and hanged on the tree one night, they come all in.

To have Nuts, Plummes, and Almonds.

Nuts greater then other.

FOR to have great Nuts, Plums, and Almonds greater then others; ye shall take foure Nuts, or of any of this fruit above-said, and put them in to a pot of earth, joyning the one with the other as neere as ye can, then make a hole in the bottome of the pot, through the which holes these Nuts shall be constrained to issue and being so constrained, shall come to perfection and grow together as in one tree, the which in time shall bring fruit greater and larger then others.

To make an Oake or other tree green in Winter as in Summer,

ALso to make an Oake or other tree to be green as wel in winter as in Summer, ye shal take the graffe of an Oake tree, or other tree, and graffe it upon the Holly tree: the best and mult su-

right way is to graffe one through the other. Also who so will edifie or make an Orchard, he ought (if he can) to make it in a moill place whereas the South winds, or Sea winds may have recourse upon them.

The time of Planting without roots and with roots.

Also the best time to plant or set without roots, as with branches or severings of all sorts of trees which hath a great pith as Fig trees, hazel trees, Mulberry trees, and Vines, with other like trees, all which ought to be set from the midst of September (if the leaves be off) unto *Athlantiade*; and all other trees with roots ought to be set in Advent until Christmas, or a mon after if the time be not very cold and dangerous.

To keep fruit from the Frost.

Also to keep fruit from the frost, and in good colour until the new come again, ye ought so far to gather them when the time is faire and drie, and the Moon in her decreasing, and that they lie also in very drie places by night covered thin with Wheat-straw, and if the time of Winter be cold and very hard, then put on Hay above them in your straw, and take it away when as a faire time commeth: and thus ye shall keepe your fruit faire and good.

The daies to plant and Graffe.

Also (as some say) from the first day of the New Moone, unto the 13. day thereof, is good for to plant or graffe, or sow and for greet need, some do take unto the 17. or 18. day thereof, and not after, neither graffe nor sow, but as is a fore mentioned, a day or two dayes before the change, the best signes are, *Taurus*, *Virgo*, and *Capricorne*.

To have green Roses all the year.

For to have green Roses, ye shall (as some say) take your Rose buds in the Spring time, and then graffe them upon the Holly stocke; and they shall be green all the year.

To keepe Raisons or Grapes good a year.

For to keepe Raisons or Grapes good all a whole year, ye shall take of good drie sand, and then lay the raisons or Grapes therein, and it shall keep them good a whole year. Some keepe them in a close Glasse from the aire.

To make fruit Laxative from the tree.

For to make any fruit laxative from the tree, what fruit soever it be, make a hole in the stock, or in the master root of the tree

(with

Planting and Graffing.

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(with a great Pearcer slopewise) not through, but unto the pith; or some what further, then fill the said hole with the Iuyce of Elder, of Centory, or of Seny, or Tabbib, or such like laxatives, then fill the said hole therewith, of which of them ye will, or else ye may take three of them together, & fill the said hole therewith and then stop the said hole close, with soft wax, then clay it thereon and put Moss very wel over al, so that nothing may issue or fall out, and all the fruit of the said Tree shall be from thence forth laxative.

Of the Soyle.

IF your ground be baren (for some are forced to make an orchard of barren ground) make a pit three quarters deep and two yards wide and round in such places where you would set your trees and fill the same with fat, pure, & mellow earth one whole foot higher then your Soyle, and therein set your Plant. For who is able to manure an whole orchard plot, if it be baren. But if you determine to manure the whole site, this is your way: Digge a trench halfe a yeard deep, all along the lower, (if there be a lower) side, of your orchard plat, casting up all the earth on the inner side, and fill the same with a good sort, horse, and tender mucke, and make such another Trench, and fill the same as the first, and so the third, and so the uphought your ground. And by this means your plot shall be fertile for your life. But be sure you set your trees, neither in dung nor barren earth.

Your ground must be plain, that it may receive and keepe moisture, not onely the Rain falling thereon, but also water cast upon it or descending from higher ground by Sluces, Conduits, &c. For I account moisture in Summer very needfull in the soyle of Trees and through winter, provided that the ground neither be boggy nor the ground also be past a p hour at any time, and but twice in the whole Summer, and so oft in winter. Therefore if your plot be in a Banke, or have a descent, make trenches by dagges, Allyes, Walkes and such like, so as the water may be staid from passage, And if too much water be any hindrance to your walks (for dry walks do wel become an orchard, & an orchard them:) rise your walks with earth first, & then with stones as big as Walnut: and lastly with gravel. In Summer you need not doubt to such water from heaven, either to hurt the health of your body, or of your trees: But in winter, if it should fall upon your trees, avoid it as much as you can. It is also thought needfull for moisture, so you let it not touch the roots of your trees: for it will breed moffe, and the boall of your tree neer the earth would have the comfort of the sun and ayre.

Hrs



*Here followeth certaine waies of Plaining
and Graffing, with other necessities herein
meet to be knowne.*

To graffe one Vine on another.



Ou that wil graff one Vine upon another, ye shal in *January*, cleave the head of the Vine, as ye do other stocks and then put in your graff, or Cion, but first ye must par him thin, ere ye set him in the head, then Clay and Moss him as the other.

Chosen dayes to Graffe in, and to chooe your Cions.

Whensoever that ye will Graffe, the best chosen time is on the last day before the change, and also in the change, and on the second day after the change, if ye graff (as some say) on the third, fourth, and fifth day after the change, it will be so many yeares, ere these Trees bring forth fruit. Which thing ye may beleue if ye wil, but I wil not, for some do hold opinion, that it is good graffing from the change, unto the eighteen day thereof, which I thinke to be good in all the increasing of the Moon, but the sooner the better.

To graffe your Cions.

Such Cions or Graffes, which ye do get on the other Trees, the young Trees of three or foure yeares or five or six yeares are best to have graff. Take them off no under boughes, but in the top

To graffe your Cions.

upon the East side, if ye can, and of the fairest and greatest. Ye shall cut them two inches long of the old Wood, beneath the joynt. And whensoever ye wil graffe, cut or pare your graffes taperwise from the joynt, two inches or more of length, which ye shall set into the stocke: and before ye set it in ye shall open your stock with a wedge of Iron, or hard wood, faire and softly: then if the sides of your clefts be ragged, ye shall pare them with the point of a sharpe knife on both sides, within and above, then let your graffes close on the outsides, and also above, but let your stock be as little while open as you can, and when your graffes be wel set in, pluck forth your wedge: and if your stocke do pinch your graffs much, then ye must put in a wedge of the same wood to helpe your graffes: Then ye shall lay a thicke barke or pill over the cleft, from the one graffe to the other, to keepe out the Clay and Raine, and so Clay them two fingers thicke round about the Clefts, and then lay on Mosse, but Woole is better next to your Clay, or else to temper your Clay with Wool or Haire, for it shall make it bide closer, and also stronger on the stocke head: some take Woole next the Clay, and wrapeth it all over with linnen clouts, for the Woole being once moist wil keepe the Clay so a long time. And other some take Woollen clouts, that have been laid in the juyce of Worm-wood, or such like bitter things to keep creeping wormes from comming under to the graffes, If ye graffe in Winter, put your Clay upper most, for Summer your Moss. For in Winter the Moss is warme, and your Clay wil not cleave. In Summer your Clay is cold, and your mosse keeps him from cleaving or chapping. To bind them, take of Willow pills, of cloven Briers, of Oziers, or such like. To gether your graffes on the East part of the tree is counted best: if ye gather them below on the under boughes, they wil grow flaggie, and spreading abroad: If ye take them in the top of the tree they wil grow upright. Yet some do gether their Cions or Graffes on the sides of the trees, and so graffe them againe on the like sides of the stocks, the which is of some men not counted so good for fruit. It is not good to graffe a great stock, for they will be forgerie they cover the head thereof.

Of Wormes in trees or fruit.

If ye have any trees eaten with wormes, or do bring Worme fruit, ye shall use to wash all his body and great branches, with two parts of Cow pisse, and one part of Vinegar, or else of

ye can get no Vinegar, with Cow pisse alone, tempered with common Asbes: then wash your trees therewith before the Spring, and in the Spring, or in Summer. Annilleeds sown about the tree to drive away worer, and the fruit shall be the sweeter.

The setting of stones and ordering thereof.

AS for Almond trees, Peach trees, Cherry trees, Plum trees, or others, ye shall thus plant or set them. Lay first the stones in water, three daies and foure nights, untill they sinke therein: then take them betwixt your finger and your thumb, with the small end upward, and so set them two fingers deep in good earth. And when ye have so done, ye shall take them all over, and so cover them: and when they begin to grow or spring, keepe them from weeds, and they shall prosper the better, especially in the first yeare. And within two or three years after, ye may set or remove them where ye list, then if ye doe remove them againe after that ye must prune off all his twigs, as ye shall see cause, nigh the stock: thus ye may doe of all kind of trees, but especially those which have the great sap, as the Mulbery, or Fig trees, or such like.

To gether Gumme of any tree.

IF ye list to have the Gumme of an Almond tree, ye shall sticke a great naile into the tree, a good way, and so let him rest, and the Gum of the tree shall issue thereat: thus do men gether Gumme of all sorts of trees: ye the common Gumme that men do use and occupy.

To set a whole Apple.

ALso some say, that if ye set a whole Apple foure fingers in the earth, all the Pepins or Curnels in the same Apple will grow up together in one whole stock or Cion, and all those Apples shall be much fairer and greater then others, but ye must take heed, how ye do set those Apples, which doe come in leape yeare, for in a leape year (as some do say) the Curnels or Pepins are turned contrary, for if ye should so set, as commonly a man doth ye shall set them contrary.

Offsetting the Almond.

Almonds doe come forth and grow commonly wel, if they be set without the shel or huske, in good earth, or in rotten Hogges dung: If ye lay Almonds one day in Vinegar, then shall they (as some say) be very good to plant: or lay them in Milk and water, untill they do sink, they shall be the better to set, or any other Nut.

Of Pipping water ad.

THe Pepins and Curnells of those Trees, which have a thick or rough barke, if ye lay them three daies in water, or else untill they sinke therein, they shall be the better, then set them, or sow them, as is afore mencioned, and then remove them, when they be wel rooted, of three or foure yeares growth, and they shall have a thin bark.

To Plant or set Vines.

If ye plant or set Vines, in the first second yeare, they will bring no fruit, but in the third yeare they will beare, if they bee well kept: ye shall cut them in January, and set them soon after they be cut from the Vine, and ye shall set two together, the one with the old wood, and the other with cut, and so let them grow, in plucking away all weeds from about them, and then ye shall remove them in the second and third yeare, being well rooted, ye shall set them well a foot deep in good fat earth, with good dung as of one foot deepe, or thereabouts, and keepe them cleane from weeds, for then they will prosper the better, & in summer when the Grape is kni, then ye shall break off his top or brance, at one or two joynts after the Grape, and so the grape shall be the greater, and in the winter when ye cut them, ye shall not leave past two or three leaders on each branch, on some branch but one leader, which must be cut be twixt two joynts, and ye shall leave the young Vine to be the leader. Also ye shal leave thereof three or foure joynts at all times; if a young Cion do come forth of the old branch, or side ther of, if ye do cut him, ye shall cut him hard by the old branch, and if ye will have him to bring the Grape next yeare, ye shal leave two or three joynts thereof, for the young Cions alwaies bringeth the grape: ye may at all times, so that the grapes be once taken and kni, ever as the superfluous Cion, do grow, ye may break them off at a joynt, or hard by the old branch, and the grapes will be the greater: thus ye may order your Vine all the summer long without any hurt.

To set or plant Cherry.

Cherry trees, and all the trees of store fruit, would be planted or set of Cions, in cold grounds and places of good earth, and like wise in high or hilly places, drie and well in the shade: if ye do remove, ye ought to remove them in November and January, if ye shal see your Cherry tree wax rotten, then shal ye make a hole in the middle of the body two foot above the ground, with a bigge Pea-

ser, that the humour may p.asse forth thereby, then afore the spring shut him up againe with a dinc of the same Tree: thus ye may do unto all other sorts of trees when they begin to rot, and is also good for them which beare scant of fruit or none.

To keepe Cherries good a yeare.

Yee shall cut off the stalkes, and then lay them in a well leaded pot, and fill the said pot therewith, then put unto them of good thin Honey, and fill the said pot therewith, then stop it with Clay that no aire enter in, then set them in some faire Seller, and put one sand under and all about it, and cover the pot well withall so let it stand or remaine: thus ye may keepe them a yeare, as fresh as though they came from the tree, and after this sort ye may keep Pares or other fruit.

Against Pismiers.

If ye have Cherry trees laded or troubled with Pismiers or Ants, ye shall rub the body of the tree, and all about the root with the ioyce of purslaine, mingled halfe with Vinegar. Some do use to annoint the Tree beneath, and all about the bodie, with Tarre and Birdlime, with Whol, & oyle boiled together, and annoint the tree beneath there with, and lay Chalkestones all about the Tree root, some say it is good therefore.

The suting of Chestnuts.

THe Chestnut trees, men do use the plant like unto the Feg-trees. They may be both planttd and grafted wel, they wax wel in fresh and fat earth, for in sand they like not. If ye will set the cuttels, ye shall lay them in water untill they do sinke, and those that do sink to the bottome of the water be best to set, which ye shall set in the Month of November and December, fore fingers deepe, a foot one from another, for when they be in these two months set or planted, they shall endure long, and beare also good fruit; yet some there be that plant or set them first in dung like beanes, that will be sweeter then the other sort, but those which be set in the two months aforesaid, shall first beare their fruit, men may pro ve which is best, experience doth teach. This is another way to proove & know, which Chestnuts be best to plant or set; that is, ye shal take a quantity of nuts, then lay them in sand the space of thirty daies, then take and wash them in water faire and clean, and throw them into water againe, and those that do sinke to the bottom, are good to plant or set, & the other which swim are

naught.

naught: thus may ye do with all other Curnele or Nuts.

To have all stone fruit taste as ye shall thinke good.

IF ye will have all stone fruit taste as ye shall fancy or think good, ye shall first lay your stones to soke in much liquor or moisture, as ye will have the fruit taste of, and then set them; as for the Date trees (as some say) he bringeth no fruit except he be an hundred years old; and the Dat stones must soke one month in the water, before he be set, then shall ye set him with the small end upward in good fat earth, in hot sandie ground four fingers deep, and when the boughs do begin to spring, then shall ye every night sprinkle them with rain water, (or other if ye have none) so long till they come forth and grown.

Of graffing the Medlar and Mistle tree.

FOr to graffe one Medlar, or mistle: men do use to graffe them on the whit Hathorne tree, they will proove well, but yet small and sower fruit; to graft one Medlar upon another is the better, some men do graffe first the Wilding Cien upon the Medlar stock, and so when he was wel taken and grown: then they graffe thereon the Medlar againe, the which do make them more sweete, very great and faire.

Of the Fig-tree.

THe Fig tree in some Countreies, beareth his fruit foure times a yeare, the black Figs are the best, being dried in the Sun, and then laid in a vessel in beds one by another, and then sprinkled or strawed all over, every lay with fine meale, then stop it up, and so it is sent out of the Land. If the Fig tree will not beare, ye shall dig him all about, and under the roots in Februarie, and sake out then all his earth, and put unto him the dung of privie, for that he liketh best: ye may mingle with it of other fat earth, as Pigeons dung minged with oyle and peper stamp, which shall forward him much so as nint his roots therewith: ye shall not plant the Fig tree in cold times, he loveth hot, or stonie, grauilly ground, and to be planted in Autumne is best.

Of the Mulberry tree.

IF ye wil plant the Mulberry tree, the Fig tree or other which bring no seed, ye shall cut the twig or branch (from the tree root) of a years growth, with the old wood or barke, aboue cubit long, which ye shall plant or set all in the earth, save a shafnet long to

it, and so let it grow in watering it as ye shall see need. This must be done before the leaves begin to spring, but take heed that ye cut not the end of a sapow, for then it will wither and dry.

O al such trees as beare bitter fruit, to make them bring sweeter, ye shall uncover all the roots in January, and rake out all that earth, then put unto them of Hogges dung great plenty, and then after put unto them of other good earth, and so cover them therewithal wel againe, and their fruit shall have a sweeter taste. This men may do with other trees which bring bitter fruit.

To help barren trees.

Here is a nother way to help barren trees, that they may bring fruit: if ye see your tree bare in three or foure years good plenty, ye shall bore a hole with an Auger or Pearcer, in the greatest place of the body, with the yard of the ground, but not through, but unto or past the hart, ye shall bore him a slope: then take honney and water mingled together a night before, then put the said honney and water into the hole, and fill it therewith, then stop it close with a short pin made of the same tree, not striken in too far for percing the Liquor.

Another way.

In the beginning of Winter ye shall dig those trees round about the roots, and let them so rest a day and night, and then put unto them of good earth, mingled wel with good store of water Oats, or with water, Barley or Wheat, laid next unto the roots, then fill it with other good earth, and he shall beare fruit, even as the boring of a hole in the master root, and strike in a pin, and so fill him againe, that help him to beare as afore declared.

To keepe your fruits.

Al fruit may be the better kept, if ye lay them in dry places, in dry Straw or Hay: but hay ripeth too soon, or in a Barly mow, not touching one the other, or in Chaffe, or in vessels of Yew, or Cypress wood, ye may so keep them wel in dry Salt, or Honny and upon bords, whereas the fire is nigh all the winter, also hanging nigh fire in the winter, in Nets of yarn.

The Mulberry tree.

The Mulberry tree, is planted or set by the Figtree, his fruit is first cower, and then sweeter, he liketh neither dew or raine, for they hurt him, he is wel pleased with foule earth and dung His branchis

branches will wax dry within every six years; then must ye cut them off, as for other trees they ought to be pruned every year, as ye shall see cause; and they will be the better, and to plant them from mid February, to mid March is best.

YE must not let your trees be too long uncleansed; ye must rub off the moss with a grāt of wood, or a rough halfe, or such like when they be moill or wet, for then it will off the sooner, for mosse doth take away the strength and substance of the fruit, and makes the trees barren at length: when you see your trees begin to wax Mossie, ye must in the winter uncover their roots, and put under them good earth: this shall helpe them, and keep them long without Mosse, for the earth not stirred about the root, is one cause of Mossiness, and also the barrenness of the ground whereon they standeth, and your moss both succour in Winter, Crows and other vermine, and so doth therein hide them in Summer, which is occasion of eating the blossoms, and tender Clons thereof.

To keepe Nuts.

FOR to keepe Nuts long, ye shall drie them and cover them in drie sand, and put them in a drie bladder, or in a Fat hide of Walnut tree, and put of drie lye berries therein, and they shall be much sweeter. To keepe Nuts green a yeare, and also fresh, ye shall put them into a pot with honie, and they shall continue fresh a yeare, and the said honey will be gentle and good for many Medicines. To keepe Walnuts fresh and green, in the time of obtaining of Vergynce, ye shall take of that Pomnis, and put thereof in the botto me of a barrel, then lay your Walnuts all over, then Pomnis over them, and so Walnuts againe, and then of the Pomnis, as you shall see cause to fill your vessel. Then stop him close as ye do a barrel, and set him in yur seller, or other place, and it shall keep your Nuts fresh and green a yeare. Some use to fill an earthen pot with small Nuts, and then put to them drie sand, and cover them with a lid of earth, or stone, and then they clay it, setting the mouth of the pot downward, two foot within the earth, in their garden, or other place, and so they will keepe v-ry moist and sweet untill new come.

To cut the Peach tree.

THE Peach tree is of this nature, if he be cut (as some say) green, it will wither and drie. Therefore if ye cut any small branch,

cutt heard by the body: the withered twigs even as they wither, must be cutt off hard by the great branches, or body thereof, for then they doe prosper the better. If a Peach tree do not like, ye shall put to his roots, the Lees of Wine mingled with water, and also wash his roots therewith, and likewise the branches, then cover him again with good earth mingled with his own leaves, for these he liketh best. Ye may graffe Peach upon Peach, upon Hasil, or ash, or upon Cherie tree, or ye may graffe the almond upon the peach-tree. And to have great Peaches, ye must take Cowes milke, and put good earth thereto, then all to strik the body of the tree therewith, both upward and downward, or else open the root all bare, three dayes and three nights, then take Goats milke, and wash all the roots therewith, and then cover them againe: this must be done when they begin to blossome, and so shall he bring great Peaches.

To colour Peach stones.

TO colour Peach stones that all the fruit thereof shall have the like colour hereafter, that is, ye shall lay or set Peach stones in the earth seven daies or more, untill ye shall see the stones begin to open, then take the stones and the kernels softly forth thereof and what colour ye will, colour the kernel therewith, and put them into the soil againe, then bind it fast together, and set it in the earth, with the smal end upward, and so let him grow, and all the Peaches which shall come of the same fruit, (grafted or ungrafted) will be of the same colour. The Peach tree ought to be planted in Autumne, before the cold do come, for he cannot abide the cold.

If Peach trees be troubled with wormes.

IF any Peach trees be troubled with wormes, ye shall take two parts of Cow piss, with one part of Vinegar, then shall ye sprinkle the tree all over therewith, and wash his roots and branches also, and it will kill the wormes: This may ye do to all other trees, which be troubled with worms.

To have Peach without stones.

YE shall take a Peach tree newly planted, then set a Willow hard by, which ye shall bore a hole through, then put the Peach tree through the said hole, and so close him on both sides thereof, Sap to Sap, and let him so grow one yeare, then the next yeare ye shall cut off the peach stock, and let the Willow feed him, and

and cut of the upper part of the willow also three fingers high, and the next winter saw him off nigh the peach, so that the Willow shall feed but the peach onely; and this way ye may have peaches without stones.

Another way for the same.

YEe shall take the graffe of Peaches, and graffe them upon the Willow stocke, and so shall your Peaches be likewise without stones.

If Trees doe not prosper.

IF that ye see that your trees doe not wax nor prosper, take and open the roots in the beginning of January, or afore, and in the biggest root thereof, make a hole with an Auger to the pith or more, then strike therein a pin of Oake, and so stop it again close, and let it be wel waxt all about the pinne, then cover him againe with good earth, and he shall doe well; some doe use to cleave the root.

How to graffe Apples, to last on the tree till Albion tide.

HOW ye may have many sorts of Apples upon your trees untill Albion tide, that is, ye shall graffe your Apples upon the Mulberry tree, and upon the Cherry tree.

To make Cherries and Peaches smell, and tast like spice.

HOW to make Cherries and Peaches, shall be pleasant, and shall smell and tast like spice, and that yee may keepe them well, till the new do come againe, ye shall graffe them on the Mulberry tree, as is aforesaid. But first ye shall soake them in Honey and Water, wherein ye shall put of the powder of Cloves, Ginger, and Cinamon.

To graffe an Apple which shall be halfe sweet and halfe sower.

TO graffe that your Apples shal be the one halfe sweet and the other halfe sower: ye shall take two Cions, the one sweet and the other sower, some do put the one Cion through the other and so graffes them between the barke and the tree: and some againe do pare both the Cions finely, and so sets them joyning into the stock, inclosing sap to sap, on both the outsidies of the graffes, unto the outside of the stocke, and so sets them in to the head as the other, and they shall bring fruit, the one halfe sweet and the other halfe sower.

To graffe a Rose on the Holly.

FOR to graffe the Holly, that his leaves shall keep all the yeare green; Some doe take and leave the Holly, and so graffes in a
K
white

white or red Rose bud, and then put Clay and Mosse to him, and let him grow, and some do put the Rose bud into a slit of the bark and so putteth Clay and Mosse, and binds him featly therin, and let him grow and he shall carry his leafe all the yeare.

Of keeping of Plums.

OF Plummies there be many sorts, as Damsons, which bee all blacke, and counted the best: All manner of others Plums a man may keepe we: a yeare, if they be gathered ripe, and then dried and put into vessels of Glasse: If ye cannot dry them well in the Sunne, ye shall dry them one handels of Oziers made like Lettice Windows, in a hot Oven after Bread is drawne forth, and so reserve them. If a Plum-tree like not, open his root, and power in al about the dregs of Wine mixt with water, and to cover him wel again, or powre on them stale Urine, or old pisse of old men, mixt with two parts of Water, and so cover him as before.

Of altering Peares, or stony fruit.

IF a Peare do tast hard or gravelly about the core, like small stones, ye shall uncover his roots (in the Winter, or afore the spring) and take out all the earth thereof, and pick out all the stones as cleane from the earth, as ye can about his root, then sift that earth, or else take off other good fat earth without stones, and fill all his roots again there with, & he shall bring a soft and gentle Peare to eat; but ye must see well to the watering of him often.

The making of Cider and Perrie.

OF Apples and Peares, men do make Cider and Perry, and because the use thereof in most places is knowne, I will here let passe to speake any further thereof, but this (in the pressing your Cider) I will counsel you to keepe cleane your vessels, and the places whereas your fruit doth lye, and especially after it is brused or broken, for then they draw filthy aire unto them and if it be nigh the Cider shall be infected therewith, and also beare the taste after the infection thereof: therefore as soone as you can, turne it into cleane and sweet vessels, as into vessels of white Wine, or of Sack or Claret, and such like, for these shall keep your Cider the better and the stronger a long time after: Ye may hang a smal bag of Linnen by a threed, down into the lower part of your vessel with powder of Cloves and Mace, cinamon, and Ginger, and such like, which will make your Cider to have a pleasant tast.

To helpe frozen Appes.

OF Apples that be frozen in the cold and extreame Winter. The remedie to have the Ice out of them, is this. Ye shall lay them first in cold water a while, and then lay them before the fire, or other heat, and they shall come to themselves againe.

To make Apples fall from the tree.

IF ye put of fiery coles under an Apple tree, and then cast off the powder of Brimstone therein, and the fume thereof ascend up, and touch an Apple that is wet, that Apple shall fall incontinent.

To water trees in Summer, if they wax dry about the root.

WHereas Apple trees be set in dry ground, and not deepe in the ground in Sommer if they want moisture, ye shall take of wheate straw, or other, and every evening (or as ye shall see cause) cast thereon water all about, and it will keepe the trees moist from time to time.

To cherish Apple trees.

IF ye use to throw (in winter) all about your Apple trees on the roots thereof, the Urine of old men or stale pisse long kept, they shall bring fruit much better, which is good for the Vine also, or if ye do sprinkle or anoint your Apple tree roots with the gall of a Bull they shall beare the better.

To make an Apple grow in a Glasse.

TAke a glasse, what fashion you wil, and put your Apple therein when he is but smal, and bind him fast to the glasse, and the glasse also to the tree, and let him grow, thus ye may have Apples of divers proportions, according to the fashion of your glass. Thus may ye make of Cucumbers, Gourdes, or Pomicitrons, the like fashion.



THese three branches and figur of grafting in the shield in Sommer, is, the first branch sheweth how the barke is taken off, the middle place sheweth, how it is set too, and the last branch sheweth how to bind him on, in saving the oylet or eye from bruising.

To graffe many sorts of Apples on one tree.

YOU may graffe on one Apple tree at once, many kind of Apples, as on every branch a contrary fruit, as is afore declared and of Peares the like: but see as nigh as you can, that all your Cions be of like springing, for else the one will not grow and shadow the other.

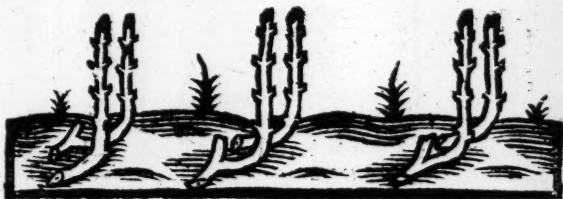
To colour Apples,

TO have coloured Apples, with what colour ye shal think good ye shal bore slope a hole with an Auger in the biggest part of the body of the tree, unto the midst thereof, or thereabouts, and then look what colour ye will have them of. First ye shall take water and mingle your colour therewith, then stop it up again

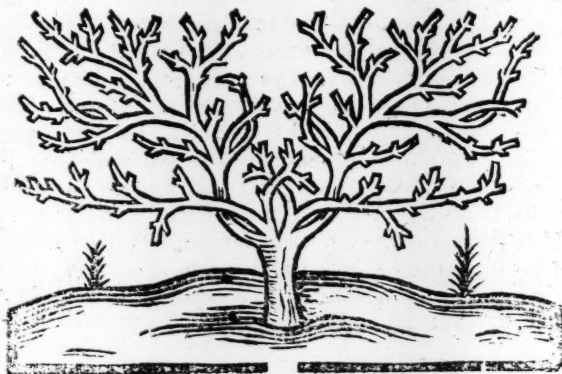
with

with a short pin made of the same wood or tree, then wax it round about : ye may mingle with the said colour (what spice ye list, to make them tast there after : thus may yee change the colour and tast of any Apple : your colours may be of *Saffron*, *Toune Soule*, *Brasell Saunders*, or others what ye shall see good. This must be done before the Spring do come : some do say, if ye graffe on the Olive stock, or on the Alder stock, they will bring red Apples. Also they say, to graffe to have fruit without core, ye shall graffe in both ends of your Cion into the stock, and when they be fast grown to the stock, ye shall cut it in the midst, and let the smaller end grow upward, or else take a cion and graffe the small end of the stock downward, and so shall ye have your Apple tree on *S. Lamberts day* (which is the 17. of *September*) they shall never wast, consume, nor wax dry, which I doubt.

The setting of Vine Plants.



THese figures do shew how ye ought to plant and set your Vines in two and two together, the one to have a part of the old tree, and the other may be all of the last Cion : but when ye plant him with a part of the old tree, he shall commonly take roots sooner then the new Cion, ye must weed them every moneth, and let not the earth be too close above their roots at the first, out now and then loose it with a spade as ye shall see a raiae past, for then they shall enlarge, and put forth better. Further herein ye shall understand after.



THis figure sheweth, how all Vines should be pruned and cut, in a convenient time after Christmas, that when ye cut them ye shall leave his branches very thin, as ye see by this figure: yee shall never leave above two or three leaders at the head of any principall branch, yee must also cut them off in the midst between the knots of the young Cions, for those be the leaders which will bring the grape, the rest in order yee shall understand as followeth

Of the Vine and Grape.

Somewhat I intend to speak of the ordering of the Vine and Grape, to plant or set the Vine: the plants or sets which be gathered from the Vine (and so planted) are best, they must not be old gathered, nor lie long unplanted after they be cut, for then they will soon gether corruptiuous, and when ye do gether your plants, ye must take heed to cut and chuse them, where ye may with the yong Cion, take a joynt of the old wood with the new, for the old wood will sooner take root then the new, & better to grow then If it were all yong Cion, ye shall leave the old wood to the yong Cion, a foot, or halfe a foot or a shaftnet long, the yong Cion ye shall cut the length of three quarters of a yard or thereabouts and ye shall chuse of these yong Cions that bee thickest joynted or nigh joynts together, and when yee shall plant or set them looke that your ground be well digged in the winter before, then

In January ye may both cut and Plant, but cut not in the frost for that is danger of all kind of trees, or ye may plant in the beginning of February; and when ye do plant, ye shall take two of those plants and set or lay them together, a foot deepe in the earth, for two plants set together will not so soone faile as one alone and lay them a foot long wayes in the earth, so that there may be above the earth three or foure joynts: ye may plant a young Cion with the old, so that he be thick or nigh joynted, for then he is the better to root, and also to bring fruit: then when ye have set or laid them in the earth, then cover them well therewith, in treading it fast downe unto the plants, but let the ends of your Cions or plants be turned up right, above the earth three or foure joynts, and there shall be more when they be set, ye shall cut them off, and ye shall cut them alwaies in the midst between the two joynts and then let them so grow, and see that ye weede them alwaies cleane, and once a moneth loose the earth round about them and they shall prove the better. If it be very dry and hot in the Summer after, yee may water them, in making a hole with a Crow of Iron to the root, and there yee shall poure in water in the evening. As for the pruning of them, when the Grape is taken and clustered, then yee may break the next joynt or two after the Grape, of all such superfluous Cions as yee shall see cause, which will cause the Grape to wax bigger: Yee may also breake away all superfluous buddes, or slender branches, which commeth about the root, or on the under branches which ye thinke will have no Grape, and when ye prune or cut them in winter following, ye shall not cut the young Cion nigh the old, by three or foure joynts, ye shall not cut them like Oziars, to leave a sort of heads together one the branch which doth kill your Vine ye shall leave but one head, or two at the most of the young Cions upon the old branch, and to cut those young Cions three or foure knots or joynts off, for the young Cions doe carry the Grape alwaies, and when yee leave upon a great branch many Cions, they cannot be well nourished, and after yae have so cut them in winter, ye shall bind them with Oziars, in placing those young branches as ye shal see cause and in the spring time, when the branches are tender, ye shall binde them so, that the stormy tempest or winde doe not hurt them, and to bind them withal, the best, is, great soft Rushes, and when the Grape is clustered, then

then ye may break off all such branches as is afore declared, upon one old branch, three or foure heads be enough, for the more heads your branch hath, the worfe your Grape shall be nourished, and when ye cut off any branch, cut him off hard by or nigh the old branch: if your Vine wax old, the best remedy is, if there grow any young Cion about the root, ye shall in the winter cut off the old Vine hard by the ground, or as nigh as you can, and let the young Vine lead, and he will continue a long time, if yee cover and fill the place about the root with good earth againe. There is also upon, or by every cluster of Grapes a small Cion like a Pigs taile, turning about, which doth take away the sap from the Grape, if ye pinch it off hard by the stalke of your Grape your fruit shall be the greater. If your Vine wax too ranke and thicke of branches, ye shall dig the root in winter, and open the earth, and fill it up againe with sand and ashes blend together, and whereas a Vine is unfruitfull and doth not beare yee shall bore a hole (with an auger) unto the heart or pith, in the body or thickest part thereof, then put in the said hole a small stone, but fill not the hole close therewith, but so that the sicknesse of the Vine may passe thereby. Then lay all about the root of good earth mingled with good dung, and so shall he not be unfruitfull, but beare well ever after: or also, to cast on old mans Uring or pisse, all about the root of the barren Vine, and if he were half lost or mard he should grow againe, and wax fruitfull, as before: This is to be done in winter.

To have Grapes without stones.

Yee shall take young plants, or branches and shall set or plant the top or smal end downward in the earth, and so ye may set two of them together for falling, as I have afore declared of the others, and those branches shall bring Grapes without stones.

To make your Vine to bring a Grape to tast like Claret.

TO make your Vine to have a Grape to tast like Claret Wine, and pleasant withall, ye shall bore a hole in the stock unto the heart, or pith thereof, then shall ye make a lectuary with the powder of cloves, of Cinamon mingled with a little fountaine or running water, and fill the said hole therewith, and stop it fast and close with wax, and so bind it fast thereon, with a linnen cloath, and those Grapes shall tast like Claret wine.

Of gathering your Grapes.

All Grapes that men do cut, before they are thorow ripe, the wine shall not be naturall, nor yet shall long endure good : But if ye will cut or gather grapes to have them good, and to have good Wine thereof, ye must cut them in the full, or soon after the full of the Moone, when she is in *Cancer*, in *Leo*, in *Scorpio*, and in *Aquarius*, the Moon being in the waine, and under the earth.

To know if your Grapes be ripe enough.

For to know if your grapes be ripe enough, or not, which yee shall not only know in the taste, but in sight, and taste together, as in taste, if they be sweet, and full of eating, and in sight, if the stones will come fall out, being chafed or brused, which is the best knowledge, and also whether they be white or blew, it is all one matter : The good Grape is he, which cometh out all watry, or those which be all clammy as birdlime, By these signes shall ye know when to cut, being thorow ripe or not, and whereas ye doe presse your wine, ye must make your place sweet and cleane, and your vessels within to be cleane also, and see that they have strong heads, and those persons which do presse the Grape, must looke their hands, feet, and body be cleane washed, when as they goe to presse the Grape, and that no woman be there having her teemes : And also ye shall eate of no Cheboles, Scalions, Cions, or Garlike, Anniseeds, or such like : For all strong savours your wine will draw the infection thereof, and as soone as your Grapes is cut and gathered, you shall presse your Wine after as soone as you may, which will make your Wine to be more pleasant and stronger, for the Grapes which tarry long unprest, maketh the wine to be small and ill : ye must see that your Vessells be new and sweet within, and to be washed with sweet water, and then well dried againe, and to perfume them with Massick, and such sweet vapour ; and if your vessell chance not to be sweet, then shall ye pitch him on the sides, which pitch wil take away all evill, and such stinging savour therein.

To prove or taste Wine.

And whensoever ye will prove or taste any Wine, the best time is, early in the morning, and take with you three or foure sops of bread, then dip one after an other into the wine, for therein ye shall find, if there be any sharpe taste of the wine. This I leave as *this present* to speake any further here of the Vine or Grape.

If this my simple labour be taken in good part (gentile Reader) it shall the more hereafter encourage me to set forth another book more at large, touching the Art of Planting and Graffing, with other things necessary to be known.

Here followeth the best time how to order or choose, and to set or plant Hoppes.



IN this figure ye shall understand, the placing and making of the Hopp hills, by every Cipher over his head: The first place is shewed, but one pole set in the midst, and the Hoppe beneath: The second sheweth, how some doth chop down a Spade in the midst of the Hill, and therein layes his Hop roots. The third place is shewed, how other some do set out one Pole in the midst, and the Hop roots at holes put in round about. The fourth place sheweth, how some chop in a Spade cross in the top, and there layes in his rootes. This fifth place sheweth, how some do set foure Poles thereing, and put the Hop round about the Hill. The sixth place sheweth, that some use to make crosse holes in the sides, and there lay the Hop roots. Thus many practises have been proved good. Provided alwaies that your Hills be of good fat earth, specially in the midst down unto the bottom. This I thought sufficient to shew by this figure, the diversity in setting, whereof the laying of the Hop is counted the surest way.

The best, and common setting time of Hoppes, is from mid *November*, to middle *February*, then must ye digge and cleane the ground of weeds, and mix it well with good mould and fat earth. Then divide your hills a yard one from another orderly, in making them a yarde a sinder, and two foot and a halfe broad in the bottom, and when that ye plant them, ye shall lay in every hill

hill three or foure roots : Some do in setting of them lay them crosse-wise in the midit of the hill, and so cover them again : some sets the roots in foure parts of the hill, other wise doe make holes round a bout the hils, and put the roors therein and so cover them again with light earth : of one short root in a yeare ye may have many plants, to set and lay as ye shall see good, and it shall be sufficient for every plant, to have two knotswithin the ground, and one without : some do chop a Spade crosse in the hill, and lay in crosse the Hop, and so cover it.

To chuse the Hop.

YEe shall chuse your roots best for your Hop, in the Summer before ye shall plant them, for then ye shall see which beares the Hop, for some there is that brings none ; but that which bears chuse for your plants, and set of those in your hils, for so shall ye not be deceived, and they shall prosper well.

To sow the seeds.

SOME doe hold, that ye may sow among other seeds, the seeds of SHops, and so will increase and be good to set, or else to make beds, and sow them alone, whereby they may increase to be set and when they be strong, ye may remove and set them in your hils, and plant them as the other before mentioned.

The setting your Poles.

THe best time is in Aprill, or when your roots be sprang halfe, a yard long or more, then by every plant or Hop, in your hils, ye shall set up a pole of 13. or 14. foot long, or there abouts, as cause shall require. Some do use to set but foure poles in every hill, which is thought sufficient, and when ye shall set them, see that ye set them so fast that great winds do not cast them down.

How to prune the Hop-tree.

YEe shall marke when the Hop doth blossome, and knit in the top, which shall be perceived to be the Hop, then take and cut up al the rest growing thereabouts (not having Hop thereon) hard by the earth, that all those which carry the Hop, might be the better nourished : thus shall ye do in Summer, as ye shall see them increase and grow, untill the time of gethering.

To gather the Hoppe.

AT such time afore *Michaelmas*, as ye shall see your hop wax browne or somewhat yellow, then he is best to be gathered in a dry day, in cutting your Hop by the ground, then plucke up your pole therewith for shaking off your Hop, so carry them into some dry house, and when ye have so pluckt them, yee shall lay them on boarded lofts, or on hurdels of clothes, that the wind may dry them, and the aire, but not the Sun, for the same will take away the strength thereof, nor with fire, for that will do likewise and ye shall toss and turn them daily till they be drie: to try them when they are dry, hold them in your hand a space, and if they cleave together when ye open your hand, they are not then drie: but if they shatter asunder in opening your hand then ye may be sure they are drie enough. If not, let them remaine and use ye them as is before said. Ye shall understand the driness of them is to preserve them and long to last, but if need be, ye may occupie them well undried, with lesse portion to sow.

What Poles are best.

YEe shall prepare your Poles of such wood as is light and stiff, and which will not bow with every winde, the best and meekest time to get them is in Winter, when the sappe is gone downe, and as soone as ye have taken off your Hoppe, lay your Poles in sundry places untill the next spring, whereby they may endure the longer.

How to order and dresse your Hills.

After the first yeare is past, your Hop being increased to more plenty of roots in your hills, ye shall after *Michaelmas* every yeare, open your hills, and cast down the tops unto the roots, uncovering them, and cut away all the superfluous roots, some doth pluck away all the roots that spreads abroad without the hills, then opens the hills and puts on good new earth unto them, and so covers them againe, which shall keep them from the Frost, and also make the ground fat. so shall ye let them remaine unto the Spring, of the yeare, in February or March, then againe, if ye shall see any superfluous roots, ye may take them away, and cut them up and your Hop shall be the better: the againe cast up the earth about your hills, and cleansing them from all weeds and other roots which will take away their strength, if the herbs remaine, so let them rest till your Poles may be set therein.

Of ground for your Hop.

THe Hoppe delighteth and loveth a good and reasonable fat ground, not very cold, nor yet too moist, for I have seene them prove well in *Flanders*, in drie sandy fields, the Hoppe hills being of good fat earth, ye may (as some say) for great neede make your Hoppe grow and beare on any kinde of rockie ground so that your hills be great and fat earth; but the lower ground commonly proveth the best, so that it stand well and hot in the Sun.

A note of the rest above-said.

Yee shall marke and understand, all this order above-said, is to have many Hoppes and good, with a few roots; and plants placed in a small plot of ground. Ye shall understand, the wilde Hoppe that groweth in the hedges, is as good to occupie as the other, to set or plant in any other place, but looke that ye take not the barren Hoppe to plant, some Hoppe will be barren for want of good earth, and lack of dressing, which yee shall perceive (as I have told you) in the Summer before, that when they should beare they will be barren, which is for want of good fat earth, or an unkind yeare, or lacke of weeding and good ordering. Therefore such as are minded to bestow labour on the ground, may have as good Hoppe growing in this Country, as is in other Countries: but if ye will not goe to the cost, to make Hop-yards, ye may with a light charge have Hops grow in your hedge-rows, to serve as well as the other, and shall be as good for the quantity as the other in all respects; ye may (for lacke of ground) plant Hop-roots in hedge-rows, when ye do quick-set, set up poles by them when time shall require in the spring, and to bestow every winter after the getting your hoppe; one every hill head a shovell full of dung to comfort the earth, for then will they beare the more plenty of Hoppe the next yeare following: to conclude, you that have grounds may well practise in all things afore mentioned, and specially to have hoppe in this ordering for your selves, and others: also ye shall give encouragement for others to follow hereafter. I have heard by credible persons, which have knowne a hundred hills (which is a small plat of ground) to beare three hundred pound of Hoppe, so that the comoditie is much, and the gaines great: and one pound of our Hoppe dyed and ordered, will goe as farre as two pound of the best Hoppe that com-

meth from beyond the Seas. Thus much I thought meet and necessary to right, of the ordering and Planting of the Hop.

How to pack your Hoppes.

WHen your Hoppes be well tossed and turned on boarded floures, and well dryed (as I have afore shewed) ye shall put them into great sakes according to the quantity of your Hoppes, and let them be trodden downe harde together, which will keepe their strength longer; and so ye may reserve them, and take at your pleasure. Some doe use (which have but small store) to tread them into dry Fats, and so preserve them for their use, which is counted the better way, and the lesse portion doth serve, and will longer keepe their vertue and strength.

*Wishing long life and prosperous health,
To all furtherers of this Common-wealth.*

FINIS.

